

SEQUENCE LISTING

<110> Contreras, Roland
Nelissen, Bart
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Luyten, Walter
Viaene, Jasmine
Logghe, Marc George

<120> Drug Targets In Candida Albicans

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<151> 1998-12-23

<150> 9817796.7

<151> 1998-08-14

<160> 114

<170> PatentIn Ver. 2.0

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<211> 1851

<212> DNA

<213> Candida albicans

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<213> *Candida albicans*

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<212> PRT

<213> *Candida albicans*

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20

25

30

Ile Ser Ile Leu Thr Asn His Phe Gln Ile Leu Lys Asp Leu Leu Pro

35

40

45

Tyr Ser Lys Thr Ser Lys Pro Gln Ile Lys Glu Ser Arg Pro Leu Ile

50

55

60

Lys Val Ser Arg Asp Gly Val Pro Ile Asn Phe His Arg Ala Pro Ala

65

70

75

80

Ile Ile Met Lys Ser Asn Lys Thr Asp Asp Leu Val Arg Asn Ser Asn

85

90

95

Lys Thr Met Val Leu Thr Glu Ile Lys Thr Ile Thr Glu Phe Ala Thr

100

105

110

Thr Thr Val Ser Pro Thr Gln Glu Phe Gln Ala Leu Gln Ile Asn Leu

115

120

125

Asn Thr Leu Ser Ile Glu Thr Ser Thr Pro Thr Phe Gln Ser His Asp

130

135

140

Phe Pro Pro Ile Thr Ile Glu Asp Thr Pro Lys Thr Leu Glu Pro Glu

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Lys Ser Phe Asn Asp Gln Leu Val Asp Ile Tyr Thr Ala Arg Ser Ile
 195 200 205

Val Pro Ile Tyr Thr Thr His Ile Val Thr Ser Ala Ile Pro Ser Tyr
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Val Pro Lys Glu Glu Val Met Val Ser His Asp Thr Ala Pro Ile Val
225 230 235 240

Ser Arg Pro Arg Thr Asp Ile Pro Val Ser Gln Arg Ile Asp Thr Ile
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Ala Thr Lys Thr Glu Val Ala Tyr Met Lys Pro Lys Ile Val Trp Thr
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Lys Glu Asp Asp Ser Asp Glu Ile Thr Ala Gln Ile Leu Leu Ser Asn
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Ser Glu Leu Gly Thr Lys Thr Pro Asn Phe Glu Asp Pro Phe Glu Gln
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Ile Asn Ile Glu Asp Asn Lys Val Ile Ser Val Asn Thr Pro Lys Thr
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Lys Lys Pro Thr Thr Thr Val Phe Gly Thr Ser Thr Ser Ala Leu Ser
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Thr Phe Glu Ser Thr Ile Phe Glu Ile Pro Lys Phe Phe Tyr Gly Ser
420 425 430

Arg Arg Lys Gln Ser Ser Ser Phe Lys Asn Lys Asn Ser Thr Ile Lys
435 440 445

Phe Asp Val Phe Asp Trp Ile Phe Glu Ser Gly Thr Thr Asn Glu Lys

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<213> Candida albicans

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<212> PRT

<213> Candida albicans

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35 40 45

Glu Ile Asn Ile Ala Tyr Glu Thr Ile Arg Asp Tyr Tyr Gln Glu Asn
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Gly Gln Lys Asn Ser Gln Pro Ile Pro Asn Thr Asn Thr Glu His Asn
65 70 75 80

Ser His Gln Lys Pro His Tyr Asn Thr Gly Pro Tyr Ser Thr Tyr Arg
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180 185 190

Gln Arg Gln Lys Glu His Glu Ala Lys Arg Asp Ile Arg Ile Gln Gln
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210 215 220

Val Phe Lys Lys Ala Arg Ser Thr Asn Ser Gly Ala Asp Glu Thr Gly
225 230 235 240

Leu Met Ser Asp Lys Glu Phe Asp Asp Ser Ala Tyr Ser Pro Asp Tyr
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Leu Phe Glu Glu Asn Leu Trp Asn Lys Pro Asn His Pro Asp Thr Asn
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His Lys Thr Lys Lys Tyr Thr Glu Asn Val Val Glu Asn Leu Asp Ser
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Pro Pro Asn Asp Thr Ser Ala Tyr Asn Ser Ser Phe His Asp Glu Thr

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Glu Ala Tyr Val Pro Asp Val Lys Ala Ala Thr Ser Asn Thr Thr Pro

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470

475

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Ala Thr Gly Gln Thr Ser Ala Arg Ser Glu Lys Ser Pro Pro Leu Pro

485

490

495

Thr His Ile Pro Asn Pro Ser Thr Met Asn Glu Ala Arg Pro His Pro

500

505

510

Thr Thr Pro His Lys Arg Ser Lys Val Ile Phe Asp Leu Lys Asp Leu

515

520

525

Glu Gln Lys Leu Gly Asn Asp Ile Glu Asp Leu Asp Phe Lys Asp Met

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535

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Tyr Glu Ser Leu Pro Asp His Ser Ser Lys Ala Thr Pro Lys Asp Asp

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Ile Leu Thr Arg Ser Lys Arg Arg Leu Tyr Thr Tyr Thr Asp Gly Thr

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Ser Lys Ala Glu Thr Leu Ser Thr Pro Met Asn Lys Asn Pro Val Arg

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Gly His Ser Thr Lys Lys Lys Leu Ser Met Leu Asp Met His Ala Ser

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Ser Lys Ile Gln Ser Leu Leu Pro Pro Gln Pro Pro Gln Met Ser Ile

610

615

620

Asp Pro Ser Val Ser Lys Gln Val Trp Ala Lys Tyr Val Asp Ala Ile

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630

635

640

Leu Thr Tyr Gln Arg Glu Phe Phe Asn Tyr Lys Lys Val Ile Val Gln

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650

655

Tyr Gln Met Glu Arg Ile Asn Lys Asp Leu Glu His Phe Asp Asp Ile

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665

670

Asn Asp Gly Ser His Thr Glu Asn Leu Asp Thr Phe Lys His Cys Leu

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Glu Gln Asp Tyr Leu Val Met Ser Glu Phe Asn Glu Ala Leu Arg Gln

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Phe Gly Thr Thr Ile Ala Thr Tyr Gln Gln Asn Leu Gln Trp Val Asn

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<211> 50

<212> PRT

<213> Candida albicans

<400> 7

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Ala Leu Ser Ser Ser Cys Leu Arg Leu Phe Ser Cys Ala Phe Trp Trp

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Lys Leu

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<212> PRT

<213> Candida albicans

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30

Asn Ser Leu Gln Thr Asn Asn Arg Val Asn Met Gln Asn His Gln Thr

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Leu Tyr Ser Thr Ser Asn Gln Ser Arg Ser Leu Pro Asn

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<212> PRT

<213> Candida albicans

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Gln Ile Phe Ser Val Val Pro Ala Ser Gly Asn Leu Thr His Gln Pro

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Gln Arg Arg Ser Phe Gln Ile Ser Phe Phe Cys Phe Gln Lys Trp Lys

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Val Thr His Val Phe Phe Val Gln Gly Trp Trp Tyr Tyr

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<212> DNA

<213> *Candida albicans*

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<210> 11

<211> 582

<212> DNA

<213> *Candida albicans*

<400> 11

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<213> Candida albicans

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<212> PRT

<213> *Candida albicans*

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30

Glu Met Gln Lys Ile Ala Arg Trp Thr Asn Leu Ser Glu Thr Thr Phe

35

40

45

Ile Leu Thr Pro Lys Ser Ser Ile Ala Xaa Tyr Ser Ile Arg Ile Phe

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65

70

75

80

Thr Ala Phe Ala Leu Leu Glu Asp Gly Lys Ile Lys Pro Asn Asp Asn

85

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Gly Gln Ile Ile Gln Glu Cys Gly Ala Gly Leu Val Lys Ile Ser Val

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105

110

Glu Lys Thr Pro Asn Asn Asn Ser Asn Glu Leu Pro Phe Leu Leu Ser
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Phe Glu Leu Pro Tyr Phe Lys Phe His Glu Ile Asp Asp Lys Val Ile
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Glu Glu Leu Gln His Ser Trp Asn Gly Thr Asn Ile Ile Gly Lys Pro
145 150 155 160

Val Leu Ile Asp Ala Gly Pro Lys Trp Ala Val Phe Gln Leu Gly Ser
165 170 175

Gly Lys Glu Val Leu Asp Leu Asn Xaa Asp Leu Ala Gln Ile Glu Arg
180 185 190

Leu Ser Leu Glu Asn Gly Trp Thr Gly Ile Gly Val Phe Gly Lys His
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Asn Glu Asn Gly Asp Ser Val Glu Leu Arg Asn Ile Ala Pro Ala Val
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Gly Val Ala Glu Asp Pro Ala Cys Gly Ser Gly Ser Gly Ala Ile Gly
225 230 235 240

Ala Tyr Leu Ala Asn His Val Phe Asn Glu Lys Glu Lys Phe Thr Ile
245 250 255

Asp Ile Ser Gln Gly Lys Pro Ile Glu Arg Asp Ala Lys Ile Gln Val
260 265 270

Lys Val Asn Arg Leu Thr Thr Lys Asn Gly Asp Leu Ser Ile His Val

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<211> 3726

<212> DNA

<213> *Candida albicans*

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<211> 942

<212> PRT

<213> Candida albicans

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30

Arg Val Leu Gly Asn Val Thr Asp Ser Thr Pro Phe Ala Met Gly Thr

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40

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Leu Gly Ser Thr Phe Tyr Ala Val Thr Ser Val Gly Arg Ser Phe Gln

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Ile Tyr Asp Leu Ala Thr Leu His Leu Leu Phe Val Ser Gln Thr Gln

65

70

75

80

Thr Pro Ser Arg Ile Thr Ser Leu Ala Ala His His His Tyr Val Tyr

85

90

95

Ala Ser Tyr Gly Asp Arg Ile Gly Ile Phe Arg Arg Gly Arg Leu Glu

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His Glu Leu Val Cys Glu Gly Asn Ser Thr Val Asn Gln Leu Leu Val

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Phe Gly Glu Tyr Leu Ile Ala Thr Thr Leu Glu Gly Asp Ile Phe Val

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Phe Arg Lys Thr Glu Gly Lys Lys Phe Pro Thr Glu Leu Tyr Thr Thr

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Ile Arg Ile Ile Asn Ser Leu Val Glu Gly Glu Ile Val Gly Leu Ile

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His Pro Pro Thr Tyr Leu Asn Lys Val Ile Val Ala Thr Thr Gln Ser

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Val Phe Val Ile Asn Val Arg Thr Gly Lys Leu Leu Tyr Lys Ser Arg

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Glu Leu Gln Phe Glu Gly Glu Lys Ile Ser Ser Ile Glu Ala Ala Pro

210

215

220

Val Leu Asp Val Ile Ala Val Gly Thr Ser Asn Gly Asn Val Phe Leu

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230

235

240

Phe Asn Ile Lys Lys Gly Lys Val Leu Gly Gln Lys Ile Ile Thr Ser

245

250

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Gly Thr Glu Ser Ser Ser Lys Val Ala Ser Ile Ser Phe Arg Thr Asp

260

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270

Gly Ala Pro His Leu Val Ala Gly Leu Asn Asn Gly Asp Leu Tyr Phe

275

280

285

Tyr Asp Leu Asp Lys Lys Ser Arg Val His Val Leu Arg Asn Ala His

290

295

300

Lys Glu Thr His Gly Gly Val Ala Asn Ala Lys Phe Leu Asn Gly Gln

305 310 315 320

Pro Ile Val Leu Ser Asn Gly Gly Asp Asn His Leu Lys Glu Phe Val

325 330 335

Phe Asp Pro Asn Leu Thr Thr Ser Asn Ser Ser Ile Val Pro Pro Pro

340 345 350

Arg His Leu Arg Ser Arg Gly Gly His Ser Ala Pro Pro Val Ala Ile

355 360 365

Glu Phe Pro Gln Glu Asp Lys Thr His Phe Leu Leu Ser Ala Ser Arg

370 375 380

Asp Lys Thr Phe Trp Ile Phe Ser Leu Arg Lys Asp Ala Gln Ala Gln

385 390 395 400

Glu Met Ser Gln Arg Leu Gln Lys Ser Lys Asp Gly Lys Arg Gln Ala

405 410 415

Gly Gln Val Val Ser Met Arg Glu Lys Phe Pro Glu Ile Ile Ser Ile

420 425 430

Ser Ser Ser Tyr Ala Arg Glu Gly Asp Trp Glu Asn Ile Ile Thr Ala

435 440 445

His Lys Asp Glu Thr Phe Ala Arg Thr Trp Asp Ser Arg Asn Lys Arg

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Val Gly Arg His Leu Leu Asn Thr Ile Asp Gly Gly Ile Val Lys Ser
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Val Cys Val Ser Gln Cys Gly Asn Phe Gly Leu Val Gly Ser Ser Ser
 485 490 495

Gly Gly Ile Gly Ser Tyr Asn Leu Gln Ser Gly Leu Leu Arg Lys Lys
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Tyr Val Leu His Lys Gln Ala Val Thr Gly Leu Ala Ile Asp Gly Met
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Asn Arg Lys Met Val Ser Cys Gly Leu Asp Gly Ile Val Gly Phe Tyr
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Asp Phe Gly Lys Ser Val Tyr Leu Gly Lys Leu Gln Leu Glu Ala Pro
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Ile Thr Ser Met Ile Tyr His Lys Ser Ser Asp Leu Val Ala Cys Ala
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Leu Asp Asp Leu Ser Ile Val Val Ile Asp Val Thr Thr Gln Lys Val
 580 585 590

Ile Arg Ile Leu Tyr Gly His Thr Asn Arg Ile Ser Gly Met Asp Phe
 595 600 605

Ser Pro Asp Gly Arg Trp Ile Val Ser Val Ala Leu Asp Ser Thr Leu

610

615

620

Arg Thr Trp Asp Leu Pro Thr Gly Gly Cys Ile Asp Gly Val Ile Leu

625

630

635

640

Pro Ile Val Ala Thr Ala Val Lys Phe Ser Pro Ile Gly Asp Ile Leu

645

650

655

Ala Thr Thr His Val Ser Gly Asn Gly Val Ser Leu Trp Thr Asn Arg

660

665

670

Ala Gln Phe Lys Pro Val Ser Thr Arg His Val Glu Glu Asp Glu Phe

675

680

685

Ser Thr Ile Leu Leu Pro Asn Ala Ser Gly Asp Gly Gly Ser Thr Met

690

695

700

Leu Asp Gly Phe Leu Asp Glu Asp Ser Asn Glu Asp Gly Thr Ile Asp

705

710

715

720

Glu Gln Tyr Thr Ser Ala Ala Gln Ile Asp Ala Ser Leu Ile Thr Leu

725

730

735

Ser Ser Glu Pro Arg Ser Lys Phe Asn Thr Leu Leu His Leu Asp Thr

740

745

750

Ile Lys Gln Gln Ser Lys Pro Lys Glu Ala Pro Lys Lys Pro Glu Asn

755

760

765

Ala Pro Phe Phe Leu Gln Leu Thr Gly Gln Ala Val Gly Asp Arg Ala

770

775

780

Ser Val Ala Glu Gly Lys Thr Ser Glu Gln Thr Asn Asn Thr Val Glu

785

790

795

800

Glu Thr Asn Ser Lys Leu Arg Lys Leu Asp Thr Asn Gly Asn His Ala

805

810

815

Phe Glu Ser Glu Phe Thr Lys Leu Leu Arg Glu Ala Gly Glu Ser Gly

820

825

830

Gln Phe Glu Arg Phe Leu Thr Tyr Leu Leu Asn Leu Ser Pro Ala Val

835

840

845

Leu Asp Leu Glu Ile Arg Ser Leu Asn Ser Phe Val Pro Leu Thr Glu

850

855

860

Met Thr Asn Phe Ile Gln Ala Leu Asn Ala Gly Leu Lys Ser Asn Ala

865

870

875

880

Asn Tyr Glu Ile Trp Glu Thr Leu Tyr Ala Met Phe Phe Asn Ile His

885

890

895

Gly Asp Val Ile His Gln Phe Glu Asn Glu Thr Ser Leu His Glu Ala

900

905

910

Leu Glu Glu Tyr Arg Gln Leu Asn Asp Glu Lys Asn Asn Lys Met Asp

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920

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Ser Leu Val Lys Tyr Cys Ala Ser Ile Val Ser Phe Ile Ser

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<211> 725

<212> DNA

<213> Candida albicans

<400> 16

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<211> 626

<212> DNA

<213> *Candida albicans*

<400> 17

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<213> *Candida albicans*

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<212> PRT

<213> Candida albicans

<400> 19

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<211> 165

<212> DNA

<213> Candida albicans

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<210> 21

<211> 564

<212> DNA

<213> *Candida albicans*

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<212> PRT

<213> *Candida albicans*

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Thr Lys Ser His Pro Phe Pro His Ala Ile Val Ala Gly Ile Glu Arg

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Ala Pro Leu Lys Val Thr Lys Lys Met Asp Ala Lys Lys Val Thr Lys

50

55

60

Arg Thr Lys Val Lys Pro Phe Val Lys Leu Val Asn Tyr Asn His Leu

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70

75

80

Met Pro Thr Arg Tyr Ser Leu Asp Val Glu Ser Phe Lys Ser Ala Val

85

90

95

Thr Ser Glu Ala Leu Glu Glu Pro Ser Gln Arg Glu Glu Ala Lys Lys

100

105

110

Val Val Lys Lys Ala Phe Glu Glu Lys His Gln Ala Gly Lys Asn Lys

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Trp Phe Phe Gln Lys Leu His Phe

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135

<210> 23

<211> 1192

<212> DNA

<213> Candida albicans

<400> 23

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<211> 336

<212> PRT

<213> *Candida albicans*

<400> 24

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20

25

30

Gln Leu Leu Leu Lys Val Asp Ala Val Gly Leu Cys His Ser Asp Leu

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45

His Val Leu Tyr Glu Gly Leu Asp Cys Gly Asp Asn Tyr Val Met Gly

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55

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His Glu Ile Ala Gly Thr Val Ala Glu Leu Gly Glu Glu Val Ser Glu

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75

80

Phe Ala Val Gly Asp Arg Val Ala Cys Val Gly Pro Asn Gly Cys Gly

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Leu Cys Lys His Cys Leu Thr Gly Asn Asp Asn Val Cys Thr Lys Ser

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Phe Leu Asp Trp Phe Gly Leu Gly Tyr Asn Gly Gly Tyr Glu Gln Phe

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120

125

Leu Leu Val Lys Arg Pro Arg Asn Leu Val Lys Ile Pro Asp Asn Val

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135

140

Thr Ser Glu Glu Ala Ala Ala Ile Thr Asp Ala Val Leu Thr Pro Tyr

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155

160

His Ala Ile Lys Ser Ala Gly Val Gly Pro Ala Ser Asn Ile Leu Ile

165

170

175

Ile Gly Ala Gly Gly Leu Gly Gly Asn Ala Ile Gln Val Ala Lys Ala

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185

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Phe Gly Ala Lys Val Thr Val Leu Asp Lys Lys Asp Lys Ala Arg Asp

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200

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Gln Ala Lys Ala Phe Gly Ala Asp Gln Val Tyr Ser Glu Leu Pro Asp

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Ser Val Leu Pro Gly Ser Phe Ser Ala Cys Phe Asp Phe Val Ser Val

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Gln Ala Thr Tyr Asp Leu Cys Gln Lys Tyr Cys Glu Pro Lys Gly Thr

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Ile Val Pro Val Gly Leu Gly Ala Thr Ser Leu Asn Ile Asn Leu Ala

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265

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Asp Leu Asp Leu Arg Glu Ile Thr Val Lys Gly Ser Phe Trp Gly Thr

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Ser Met Asp Leu Arg Glu Ala Phe Glu Leu Ala Ala Gln Gly Lys Val

290

295

300

Lys Pro Asn Val Ala His Ala Pro Leu Ser Glu Leu Pro Lys Tyr Met

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<210> 25

<211> 2481

<212> DNA

<213> *Candida albicans*

<400> 25

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<210> 26

<211> 826

<212> PRT

<213> Candida albicans

<400> 26

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20 25 30

Lys Asp Asn Ala Leu Val Val Asp Asp Ala Thr Asn Asp Asp Asn Ser

35 40 45

Val Ile Thr Met Ser Ser Asn Thr Met Glu Leu Leu Gln Leu Phe Arg

50 55 60

Gly Asp Thr Val Leu Val Lys Gly Lys Lys Arg Lys Asp Thr Val Leu

65 70 75 80

Ile Val Leu Ala Asp Asp Asp Met Pro Asp Gly Val Ala Arg Val Asn

85 90 95

Arg Cys Val Arg Asn Asn Leu Arg Val Arg Leu Gly Asp Ile Val Thr

100 105 110

Val His Pro Cys Pro Asp Ile Lys Tyr Ala Asn Arg Ile Ser Val Leu

115 120 125

Pro Ile Ala Asp Thr Val Glu Gly Ile Asn Gly Ser Leu Phe Asp Leu

130

135

140

Tyr Leu Lys Pro Tyr Phe Val Glu Ala Tyr Arg Pro Val Arg Lys Gly

145

150

155

160

Asp Leu Phe Thr Val Arg Gly Gly Met Arg Gln Val Glu Phe Lys Val

165

170

175

Val Glu Val Asp Pro Glu Glu Ile Ala Ile Val Ala Gln Asp Thr Ile

180

185

190

Ile His Cys Glu Gly Glu Pro Ile Asn Arg Glu Asp Glu Glu Asn Ser

195

200

205

Leu Asn Glu Val Gly Tyr Asp Asp Ile Gly Gly Cys Lys Lys Gln Met

210

215

220

Ala Gln Ile Arg Glu Leu Val Glu Leu Pro Leu Arg His Pro Gln Leu

225

230

235

240

Phe Lys Ser Ile Gly Ile Lys Pro Pro Lys Gly Ile Leu Met Tyr Gly

245

250

255

Pro Pro Gly Thr Gly Lys Thr Ile Met Ala Arg Ala Val Ala Asn Glu

260

265

270

Thr Gly Ala Phe Phe Phe Leu Ile Asn Gly Pro Glu Ile Met Ser Lys

275

280

285

Met Ala Gly Glu Ser Glu Ser Asn Leu Arg Lys Ala Phe Glu Glu Ala

290

295

300

Glu Lys Asn Ser Pro Ser Ile Ile Phe Ile Asp Glu Ile Asp Ser Ile

305

310

315

320

Ala Pro Lys Arg Asp Lys Thr Asn Gly Glu Val Glu Arg Arg Val Val

325

330

335

Ser Gln Leu Leu Thr Leu Met Asp Gly Met Lys Ala Arg Ser Asn Val

340

345

350

Val Val Ile Ala Ala Thr Asn Arg Pro Asn Ser Ile Asp Pro Ala Leu

355

360

365

Arg Arg Phe Gly Arg Phe Asp Arg Glu Val Asp Ile Gly Val Pro Asp

370

375

380

Ala Glu Gly Arg Leu Glu Ile Leu Arg Ile His Thr Lys Asn Met Lys

385

390

395

400

Leu Ala Asp Asp Val Asp Leu Glu Ala Ile Ala Ser Glu Thr His Gly

405

410

415

Phe Val Gly Ala Asp Ile Ala Ser Leu Cys Ser Glu Ala Ala Met Gln

420

425

430

Gln Ile Arg Glu Lys Met Asp Leu Ile Asp Leu Glu Glu Glu Thr Ile

435

440

445

Asp Thr Glu Val Leu Asn Ser Leu Gly Val Thr Gln Asp Asn Phe Arg

450

455

460

Phe Ala Leu Gly Asn Ser Asn Pro Ser Ala Leu Arg Glu Thr Val Val

465

470

475

480

Glu Asn Val Asn Val Thr Trp Asp Asp Ile Gly Gly Leu Asp Asn Ile

485

490

495

Lys Asn Glu Leu Lys Glu Thr Val Glu Tyr Pro Val Leu His Pro Asp

500

505

510

Gln Tyr Gln Lys Phe Gly Leu Ala Pro Thr Lys Gly Val Leu Phe Phe

515

520

525

Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala Lys Ala Val Ala Thr

530

535

540

Glu Val Ser Ala Asn Phe Ile Ser Val Lys Gly Pro Glu Leu Leu Ser

545

550

555

560

Met Trp Tyr Gly Glu Ser Glu Ser Asn Ile Arg Asp Ile Phe Asp Lys

565

570

575

Ala Arg Ala Ala Ala Pro Thr Val Val Phe Leu Asp Glu Leu Asp Ser

580

585

590

Ile Ala Lys Ala Arg Gly Gly Ser His Gly Asp Ala Gly Gly Ala Ser

595

600

605

Asp Arg Val Val Asn Gln Leu Leu Thr Glu Met Asp Gly Met Asn Ala

610

615

620

Lys Lys Asn Val Phe Val Ile Gly Ala Thr Asn Arg Pro Asp Gln Ile

625

630

635

640

Asp Pro Ala Leu Leu Arg Pro Gly Arg Leu Asp Gln Leu Ile Tyr Val

645

650

655

Pro Leu Pro Asp Glu Pro Ala Arg Leu Ser Ile Leu Gln Ala Gln Leu

660

665

670

Arg Asn Thr Pro Leu Glu Pro Gly Leu Asp Leu Asn Glu Ile Ala Lys

675

680

685

Ile Thr His Gly Phe Ser Gly Ala Asp Leu Ser Tyr Ile Val Gln Arg

690

695

700

Ser Ala Lys Phe Ala Ile Lys Asp Ser Ile Glu Ala Gln Val Lys Ile

705

710

715

720

Asn Lys Ile Lys Glu Glu Lys Glu Lys Val Lys Thr Glu Asp Val Asp

725

730

735

Met Lys Val Asp Glu Val Glu Glu Glu Asp Pro Val Pro Tyr Ile Thr

740

745

750

Arg Ala His Phe Glu Glu Ala Met Lys Thr Ala Lys Arg Ser Val Ser

755

760

765

Asp Ala Glu Leu Arg Arg Tyr Glu Ser Tyr Ala Gln Gln Leu Gln Ala

770

775

780

Ser Arg Gly Gln Phe Ser Ser Phe Arg Phe Asn Glu Asn Ala Gly Ala

785

790

795

800

Thr Asp Asn Gly Ser Ala Ala Gly Ala Asn Ser Gly Ala Ala Phe Gly

805

810

815

Asn Val Glu Glu Glu Asp Asp Leu Tyr Ser

820

825

<210> 27

<211> 1918

<212> DNA

<213> Candida albicans

<400> 27

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caaaaaatcc tcaccagaag aaaaaaaaaat caattttcac aggtaaagtt gtacggacag 180

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<210> 28

<211> 466

<212> PRT

<213> Candida albicans

<400> 28

Met Ser Ala Phe Arg Ser Ile Gln Arg Ser Thr Asn Val Ala Lys Ser

1

5

10

15

Thr Phe Lys Asn Ser Ile Arg Thr Tyr Ala Ser Ala Glu Pro Thr Leu

20

25

30

Lys Gln Arg Leu Glu Glu Ile Leu Pro Ala Lys Ala Glu Glu Val Lys

35

40

45

Gln Phe Lys Lys Glu His Gly Lys Thr Val Ile Gly Glu Val Leu Leu

50

55

60

Glu Gln Ala Tyr Gly Gly Met Arg Gly Ile Lys Gly Leu Val Trp Glu

65

70

75

80

Gly Ser Val Leu Asp Pro Ile Glu Gly Ile Arg Phe Arg Gly Arg Thr

85

90

95

Ile Pro Asp Ile Gln Lys Glu Leu Pro Lys Ala Pro Gly Gly Glu Glu

100

105

110

Pro Leu Pro Glu Ala Leu Phe Trp Leu Leu Leu Thr Gly Glu Val Pro

115

120

125

Thr Asp Ala Gln Thr Lys Ala Leu Ser Glu Glu Phe Ala Ala Arg Ser

130

135

140

Ala Leu Pro Lys His Val Glu Glu Leu Ile Asp Arg Ser Pro Ser His

145

150

155

160

Leu His Pro Met Ala Gln Phe Ser Ile Ala Val Thr Ala Leu Glu Ser

165

170

175

Glu Ser Gln Phe Ala Gln Ala Tyr Ala Lys Gly Ala Asn Lys Ser Glu

180

185

190

Tyr Trp Lys Tyr Thr Tyr Glu Asp Ser Ile Asp Leu Leu Ala Lys Leu

195

200

205

Pro Thr Ile Ala Ala Lys Ile Tyr Arg Asn Val Phe His Asp Gly Lys

210

215

220

Leu Pro Ala Ala Ile Asp Ser Lys Leu Asp Tyr Gly Ala Asn Leu Ala

225

230

235

240

Ser Leu Leu Gly Phe Gly Asp Asn Lys Glu Phe Val Glu Leu Met Arg

245

250

255

Leu Tyr Leu Thr Ile His Ser Asp His Glu Gly Gly Asn Val Ser Ala

260

265

270

His Thr Thr His Leu Val Gly Ser Ala Leu Ser Ser Pro Phe Leu Ser
275 280 285

Leu Ala Ala Gly Leu Asn Gly Leu Ala Gly Pro Leu His Gly Arg Ala
290 295 300

Asn Gln Glu Val Leu Glu Trp Leu Phe Lys Leu Arg Glu Glu Leu Asn
305 310 315 320

Gly Asp Tyr Ser Lys Glu Ala Ile Glu Lys Tyr Leu Trp Glu Thr Leu
325 330 335

Asn Ser Gly Arg Val Val Pro Gly Tyr Gly His Ala Val Leu Arg Lys
340 345 350

Thr Asp Pro Arg Tyr Thr Ala Gln Arg Glu Phe Ala Leu Lys His Met
355 360 365

Pro Asp Tyr Glu Leu Phe Lys Leu Val Ser Asn Ile Tyr Glu Val Ala
370 375 380

Pro Gly Val Leu Thr Lys His Gly Lys Thr Lys Asn Pro Trp Pro Asn
385 390 395 400

Val Asp Ser His Ser Gly Val Leu Leu Gln Tyr Tyr Gly Leu Thr Glu
405 410 415

Gln Ser Phe Tyr Thr Val Leu Phe Gly Val Ser Arg Ala Phe Gly Val

420

425

430

Leu Pro Gln Leu Ile Leu Asp Arg Gly Ile Gly Met Pro Ile Glu Arg

435

440

445

Pro Lys Ser Phe Ser Thr Glu Lys Tyr Ile Glu Leu Val Lys Asn Ile

450

455

460

Asn Lys

465

<210> 29

<211> 2862

<212> DNA

<213> Candida albicans

<400> 29

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<210> 30

<211> 953

<212> PRT

<213> Candida albicans

<400> 30

Met Ile Asp Glu Leu Ile Asp Ile Ile Glu Ile Leu Leu Ala Lys Ser

1

5

10

15

Ile Lys Asp Glu Gln Phe Glu Asn Phe Leu Lys Phe Glu Tyr Cys Arg

20

25

30

Ala Leu Leu Ser Gln Thr Asn Asn Asn Pro Thr Asn Asp Val Lys Phe

35

40

45

Ser Gln Ile Phe Leu Asp Leu Lys Lys Arg Ser Gln Asn Trp Lys Ser

50

55

60

Phe Asp Asp Ile Ile Gln Leu Ser Leu Leu Gln Leu Gln Tyr Cys Ile

65

70

75

80

Tyr Ala Lys Asn Ser Ile Lys Ala Lys Asp Arg Phe Asn Gly Ile Leu

85

90

95

Gln Thr Leu Leu Lys Lys Pro Gln Phe Asn Ile Ser Lys Ser Lys Asn

100

105

110

Leu Pro Ile Val Ser Lys Leu Gln Asn Phe Leu Ile Leu Gly Lys Phe

115

120

125

Gln Leu Leu Ala Cys His Val Asn Asn His Ile Ile His Asn Lys Ile

130

135

140

Glu Ala Phe Asn Asn Ile Lys Thr Gly Ile Gln Leu Leu Tyr Ser Ile

145

150

155

160

Val Lys Lys Leu Pro Thr Asn Ile Asn Lys Thr Leu Trp Gln Glu Leu

165

170

175

Asn Trp Glu Ile Thr Arg Leu Leu Phe Asp Ser Tyr Lys Leu Ala Ile

180

185

190

Asp Leu Ser Ile Asp Ile Gly Ile Ser Arg Asp Ile Pro Leu Phe Leu

195

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205

Asn Glu Trp Val Lys Leu Asn Asn Ser Ile Asp Asn Asp Val Pro Ile

210

215

220

Val Asn Cys Ile Asn Glu Phe Glu Ile Gly Arg Tyr Gly Leu Leu Ser
225 230 235 240

Asn Asn Glu Phe Gln Lys Tyr Ile Arg Ile Ala Gln Gly Arg Leu Gly
245 250 255

Tyr Ser Leu Val Lys Asn Asn Ser Ala Val Gln Gln Tyr Ile Asn Arg
260 265 270

Asp Arg Asp Asp Glu Ile Cys Gly His Ala Ser Ser Ser Arg Gln Leu
275 280 285

Lys Ser Leu Val Arg Thr Ile Phe Asn Ser Asp Asn Ser Leu Ser Glu
290 295 300

Leu Ser Lys Ser Val Gln Leu Leu Pro Cys Ile Ile Gly Asp Ser Ser
305 310 315 320

Thr Met Cys Ser Lys Glu Leu Leu Asp Lys Leu Val Gln Leu Lys Asn
325 330 335

Glu Ile Leu Thr Glu Val Thr Asn Tyr Glu Lys Ser Ser Ser Leu Ser
340 345 350

Leu Asn Gln Gln Gln Gln Leu Ile Asn Asn Leu Asn Gln Val Val Cys
355 360 365

Leu Leu Ser Ser Leu Thr Ser Phe Lys Gly Asp Gly Leu Leu Ser Glu

370

375

380

Val Tyr Tyr Leu Gln Asp Tyr Val Arg Asn Leu Pro Phe Ala Asn Glu

385

390

395

400

Arg Lys Leu Met Asp Ser Ser Lys Gln Asp Glu Ser Asn Asn Leu Leu

405

410

415

Pro Arg Ala Leu Asp Phe Asn Gln Val Val Glu Asp Pro Ser Asn Thr

420

425

430

Thr Ile Asn Asn Ser Met Ile Asp Phe Asn Val Asp Leu Gln Leu Tyr

435

440

445

Leu Pro His Asn Trp Ile Leu Val Thr Leu Asp Ile Cys Gln Asn Thr

450

455

460

Gly Asp Leu Leu Ile Ser Lys Leu Thr Lys Gly Ser Pro Asn Pro Ile

465

470

475

480

Phe Met Arg Leu Pro Leu Ser Arg Phe Pro Ser Ser Leu Gly Phe Gln

485

490

495

Gln Leu Met Gln Asn Phe Glu Lys Ile Ile Asp Asp Ser Asn Leu Ser

500

505

510

Thr Lys Arg Lys Thr Thr Ser Lys Ile Leu Thr Val Glu Asp Arg Lys

515

520

525

Gln Trp Trp Arg Ser Arg Phe Thr Leu Asp Phe Gln Leu Gln Asp Ile

530

535

540

Leu His His Val Glu Ser Lys Trp Phe Gly Gly Phe Ile Ser Gly Ile

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555

560

Phe Thr Asn Asp Asn Asp Val Glu Asn Glu Ser Lys Asn Val Phe His

565

570

575

Lys Phe Lys Gln Asp Leu Met Lys Ile Leu Lys Asp Cys Leu Thr Val

580

585

590

Ser Asp Asp Lys Ser Asn Ile Glu Arg Phe Leu Gln Phe Asn Glu Phe

595

600

605

Ile Tyr Tyr Cys Phe Tyr Ser Met Glu Glu Tyr Asn Tyr Glu Leu Val

610

615

620

Asp Asp Leu Ile Lys Phe Ile Thr Ile Asn Met Asn Ser His Gly Arg

625

630

635

640

Ile Val Asn Phe Gly Thr Asn Val Lys Ile Asn Lys Leu His Glu Leu

645

650

655

Ile Lys Asn Leu Ile Asp Lys Val Asn Lys Asn Lys Gln Asn Val Thr

660

665

670

Ser Asn Asn Lys Asn Asn Ser Asn Asn Asn Ser Asn Asn Asn Ser Asn

675

680

685

Ser Asn Asn Ser Gln His Ile Val Leu Ile Pro Asn Ala Asn Cys Ser

690

695

700

Asn Phe Pro Trp Glu Ser Met Glu Phe Leu Arg Ser Lys Ser Ile Ser

705

710

715

720

Arg Met Pro Ser Ile His Met Leu Leu Asp Leu Val Lys Ser Asn Thr

725

730

735

Asn Asn Lys Asn Lys Leu Met Phe Val Asp Lys Ser Asn Leu Tyr Tyr

740

745

750

Leu Ile Asn Pro Ser Gly Asp Leu Ile Arg Ser Glu Asn Arg Phe Lys

755

760

765

Lys Leu Phe Glu Ser Asn His Leu Trp Arg Gly Glu Ile Gly Lys Leu

770

775

780

Ser Ser Asn Glu His Glu Asp Tyr Gln Asp Ser Ile Leu Cys Glu Ile

785

790

795

800

Leu Lys Ser His Leu Phe Val Tyr Ile Gly His Gly Gly Cys Asp Gln

805

810

815

Tyr Ile Lys Val Ser Lys Leu Phe Lys Lys Cys Gly Asn Asn Gln Asp

820

825

830

Leu Ser Asn Lys Leu Pro Pro Ser Leu Leu Leu Gly Cys Ser Ser Val

835

840

845

Lys Leu Asp Asn Cys Asn Tyr Asn Tyr Asn Ser Ser Met Leu Gln Pro

850

855

860

Ser Gly Asn Ile Tyr Asn Trp Leu Asn Cys Lys Ser Ser Met Ile Leu

865

870

875

880

Gly Asn Leu Trp Asp Val Thr Asp Lys Asp Ile Asp Ile Phe Thr Leu

885

890

895

Ser Leu Leu Gln Lys Trp Gly Leu Ile Asp Asp Tyr Asn Gly Ser Gly

900

905

910

His Asp Tyr Gly Met Lys Lys Leu Asp Leu Thr Asn Cys Val Val Gln

915

920

925

Ser Arg Ser Lys Cys Thr Leu Lys Tyr Leu Asn Gly Ser Ala Pro Val

930

935

940

Val Tyr Gly Leu Pro Met Tyr Leu Lys

945

950

<210> 31

<211> 1443

<212> DNA

<213> *Candida albicans*

<400> 31

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1443

<210> 32

<211> 399

<212> PRT

<213> Candida albicans

<400> 32

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10

15

Lys Ser Thr Lys Gly Ile Lys Val His Arg Thr Phe Glu Ser Met Asn

20

25

30

Leu Lys Pro Asp Leu Leu Lys Gly Ile Tyr Ala Tyr Gly Phe Glu Ala

35

40

45

Pro Ser Ala Ile Gln Ser Arg Ala Ile Met Gln Ile Ile Ser Gly Arg

50

55

60

Asp Thr Ile Ala Gln Ala Gln Ser Gly Thr Gly Lys Thr Ala Thr Phe

65

70

75

80

Ser Ile Gly Met Leu Glu Val Ile Asp Thr Lys Ser Lys Glu Cys Gln

85

90

95

Ala Leu Ile Leu Ser Pro Thr Arg Glu Leu Ala Ile Gln Ile Gln Asn

100

105

110

Val Val Met His Leu Gly Asp Tyr Met Asn Ile His Thr His Ala Cys

115

120

125

Ile Gly Gly Lys Asn Val Gly Glu Asp Val Lys Lys Leu Gln Gln Gly

130

135

140

Gln Gln Ile Val Ser Gly Thr Pro Gly Arg Val Ile Asp Val Ile Lys

145

150

155

160

Arg Arg Asn Leu Gln Thr Arg Asn Ile Lys Val Leu Ile Leu Asp Glu

165

170

175

Ala Asp Glu Leu Phe Thr Lys Gly Phe Lys Glu Gln Ile Tyr Glu Ile

180

185

190

Tyr Lys His Leu Pro Pro Ser Val Gln Val Val Val Val Ser Ala Thr

195

200

205

Leu Pro Arg Glu Val Leu Glu Met Thr Ser Lys Phe Thr Thr Asp Pro

210

215

220

Val Lys Ile Leu Val Lys Arg Asp Glu Ile Ser Leu Ser Gly Ile Lys

225

230

235

240

Gln Tyr Tyr Val Gln Cys Glu Arg Glu Asp Trp Lys Phe Asp Thr Leu

245

250

255

Cys Asp Leu Tyr Asp Asn Leu Thr Ile Thr Gln Ala Val Ile Phe Cys

260

265

270

Asn Thr Lys Leu Lys Val Asn Trp Leu Ala Asp Gln Met Lys Lys Gln

275

280

285

Asn Phe Thr Val Val Ala Met His Gly Asp Met Lys Gln Asp Glu Arg

290

295

300

Asp Ser Ile Met Asn Asp Phe Arg Arg Gly Asn Ser Arg Val Leu Ile

305

310

315

320

Ser Thr Asp Val Trp Ala Arg Gly Ile Asp Val Gln Gln Val Ser Leu

325

330

335

Val Ile Asn Tyr Asp Leu Pro Thr Asp Lys Glu Asn Tyr Ile His Arg

340

345

350

Ile Gly Arg Ser Gly Arg Phe Gly Arg Lys Gly Thr Ala Ile Asn Leu

355

360

365

Ile Thr Lys Asp Asp Val Val Thr Leu Lys Glu Leu Glu Lys Tyr Tyr

370

375

380

Ser Thr Lys Ile Lys Glu Met Pro Met Asn Ile Asn Asp Ile Met

385

390

395

<210> 33

<211> 825

<212> DNA

<213> *Candida albicans*

<400> 33

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<210> 34

<211> 206

<212> PRT

<213> *Candida albicans*

<400> 34

Met Ile Ser Gly Met Leu Tyr Asn Cys Leu Gln Lys Glu Leu Glu Thr

1

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10

15

Thr Arg Met Ser Cys Arg Asp Tyr Met Leu Asp Tyr Gly Ser Phe Arg

20

25

30

Thr Arg Asp Tyr Lys Thr Thr Gln Glu Phe Leu Asp Ala Lys Tyr Lys

35

40

45

His Leu Glu Ser Phe Ile Gly His Val Gly Lys Asn Ala Phe Met Glu

50

55

60

Tyr Pro Ile Tyr Phe Asp Tyr Gly Phe Asn Thr Tyr Leu Gly Asp Asn

65

70

75

80

Phe Tyr Ser Asn Tyr Asn Leu Thr Ile Leu Asp Val Ser Ile Val Arg

85

90

95

Ile Gly Asn Asn Val Lys Cys Gly Pro Asn Val Ser Ile Leu Thr Pro

100

105

110

Thr His Pro Val Asp Pro Thr Leu Arg Tyr Asp Gln Leu Glu Asn Ala

115

120

125

Leu Pro Val Thr Val Gly Asn Gly Val Trp Leu Cys Gly Ser Cys Thr

130

135

140

Ile Leu Gly Gly Val Thr Val Gly Asp Gly Ser Ile Val Ala Ala Gly

145

150

155

160

Ala Val Val Asn Lys Asp Val Pro Pro Asn Thr Val Val Ala Gly Val

165

170

175

Pro Ala Arg Val Val Lys Gln Leu Glu Pro Arg Asp Pro Asn Phe Asp

180

185

190

Thr Met Ala Val Leu Lys Gln Tyr Gly Met Gly Tyr Ile Asp

195

200

205

<210> 35

<211> 823

<212> DNA

<213> Candida albicans

<400> 35

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ggtgtatctt aactcttatt cattttgtat atttaataca tat 823

<210> 36

<211> 176

<212> PRT

<213> Candida albicans

<400> 36

Met Ser Gln Val Ala Pro Lys Trp Tyr Gln Ser Glu Asp Val Pro Ala

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5

10

15

Pro Lys Gln Thr Arg Lys Thr Ala Arg Pro Gln Lys Leu Arg Ala Ser

20

25

30

Leu Val Pro Gly Thr Val Leu Ile Leu Leu Ala Gly Arg Phe Arg Gly

35

40

45

Lys Arg Val Val Tyr Leu Lys Asn Leu Glu Asp Asn Thr Leu Leu Val

50

55

60

Ser Gly Pro Phe Lys Val Asn Gly Val Pro Leu Arg Arg Val Asn Ala

65

70

75

80

Arg Tyr Val Ile Ala Thr Ser Thr Lys Val Asn Val Ser Gly Val Asp

85

90

95

Val Ser Lys Phe Asn Val Glu Tyr Phe Ala Arg Glu Lys Ser Ser Lys

100

105

110

Ser Lys Lys Ser Glu Ala Glu Phe Phe Asn Glu Ser Gln Pro Lys Lys

115

120

125

Glu Ile Lys Ala Glu Arg Val Ala Asp Gln Lys Ser Val Asp Ala Ala
 130 135 140

Leu Leu Ser Glu Ile Lys Lys Thr Pro Leu Leu Lys Gln Tyr Leu Ala
 145 150 155 160

Ala Ser Phe Ser Leu Lys Asn Gly Asp Arg Pro His Leu Leu Lys Phe
 165 170 175

<210> 37

<211> 415

<212> DNA

<213> Candida albicans

<400> 37

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 ttgataattg ggtattttta gaaattactt tttttatatt gcaaattaat tttaatcttt 360
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<210> 38

<211> 87

<212> PRT

<213> Candida albicans

<400> 38

Met Glu Asn Asp Lys Gly Gln Leu Val Glu Leu Tyr Val Pro Arg Lys

1

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10

15

Cys Ser Ala Thr Asn Arg Ile Ile Lys Ala Lys Asp His Ala Ser Val

20

25

30

Gln Ile Ser Ile Ala Lys Val Asp Glu Asp Gly Arg Ala Ile Ala Gly

35

40

45

Glu Asn Ile Thr Tyr Ala Leu Ser Gly Tyr Val Arg Gly Arg Gly Glu

50

55

60

Ala Asp Asp Ser Leu Asn Arg Leu Ala Gln Gln Asp Gly Leu Leu Lys

65

70

75

80

Asn Val Trp Ser Tyr Ser Arg

85

<210> 39

<211> 1685

<212> DNA

<213> Candida albicans

<400> 39

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<210> 40

<211> 537

<212> PRT

<213> Candida albicans

<400> 40

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Tyr Gly Leu Ile Tyr Leu Val Glu Asn Ile Tyr Thr Lys Gln Gln Phe
 20 25 30

Ala Ala Lys Met Val Leu Glu Gln Pro Leu Leu Lys Gln Lys Gln Gln
 35 40 45

Gln Gln Gln Ser His His Gly His Lys Gly Glu Ser Ser Met Asn Lys
 50 55 60

Gln Ile Ile Ser Gln Glu Phe Tyr Gln Tyr Phe Leu Asn Asn Ser Met
 65 70 75 80

Pro Gln Pro Arg Asn Leu Asp Leu Asn Tyr Leu Arg Asp Asn Gly His
 85 90 95

Asp Cys Pro Phe Leu Thr Glu Ile Ser Leu His Leu Lys Val His Gln

100

105

110

His Pro Asn Ile Ala Thr Ile His Gln Val Leu Asn Ile Glu Asp Phe

115

120

125

Ala Ile Ile Ile Leu Met Asp His Phe Glu Gln Gly Asp Leu Phe Thr

130

135

140

Asn Ile Ile Asp Arg Gln Ile Phe Thr Asn Asn Ser His Arg Lys Val

145

150

155

160

Pro Arg Thr Asp Phe Glu Thr Gln Leu Leu Met Lys Asn Ala Met Leu

165

170

175

Gln Leu Ile Glu Ala Ile Glu Tyr Cys His Glu Asn Asn Ile Tyr His

180

185

190

Cys Asp Leu Lys Pro Glu Asn Ile Met Val Arg Tyr Asn Pro Tyr Tyr

195

200

205

Val Arg Pro Thr Ile Asn Asn Asn Asn Asn Asn Gly Glu Asp Asp Leu

210

215

220

Cys Tyr Ala Asn Ser Ile Ile Asp Tyr Asn Glu Leu His Leu Val Leu

225

230

235

240

Ile Asp Phe Gly Leu Ala Met Asp Ser Ala Thr Ile Cys Cys Asn Ser

245

250

255

Cys Arg Gly Ser Ser Phe Tyr Met Ala Pro Glu Arg Thr Thr Asn Tyr

260

265

270

Asn Thr His Arg Leu Ile Asn Gln Leu Ile Asp Met Asn Gln Tyr Glu

275

280

285

Ser Ile Glu Ile Asn Gly Thr Thr Val Thr Lys Ser Asn Cys Lys Tyr

290

295

300

Leu Pro Thr Leu Ala Gly Asp Ile Trp Ser Leu Gly Val Leu Phe Ile

305

310

315

320

Asn Ile Thr Cys Ser Arg Asn Pro Trp Pro Ile Ala Ser Phe Asp Asn

325

330

335

Asn Gln Asn Asn Glu Val Phe Lys Asn Tyr Met Leu Asn Asn Asn Lys

340

345

350

Ala Val Leu Ser Lys Ile Leu Pro Ile Ser Ser Gln Phe Asn Arg Leu

355

360

365

Leu Asp Arg Ile Phe Lys Leu Asn Pro Asn Asp Arg Ile Asp Leu Pro

370

375

380

Thr Leu Tyr Lys Glu Val Ile Arg Cys Asp Phe Phe Lys Asp Asp His

385

390

395

400

Tyr Tyr Tyr Ala Gln His Gln His His His Asn His Asn Gln Ile Asn

405

410

415

Asn Ala Tyr Asn His Tyr Gln Lys Gln Pro Asn Gln Ala Arg Pro Thr

420

425

430

Ala Asn Gln Gln Leu Tyr Thr Pro Pro Glu Thr Thr Thr Tyr Asn Ser

435

440

445

Tyr Ala Ser Asp Met Glu Glu Asp Glu Ile Ser Asp Asp Glu Phe Tyr

450

455

460

Ser Asp Glu Glu Asp Glu Asp Ile Glu Asp Tyr Glu Glu Glu Glu Glu

465

470

475

480

Glu Tyr Phe Gly Asn Glu Gln Gln Gln Gln Gln Val Thr Thr Val

485

490

495

Asn Gly Asn Phe Gly Gln Val Lys Gly Thr Cys Tyr Tyr Asp Thr Lys

500

505

510

Thr Lys Thr Thr Thr Tyr Ile Lys Pro Pro Ala Ala Tyr Thr Leu Glu

515

520

525

Thr Pro Ser Gln Ser Val Glu Tyr Cys

530

535

<211> 848

<212> DNA

<213> *Candida albicans*

<400> 41

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848

<210> 42

<211> 248

<212> PRT

<213> *Candida albicans*

<400> 42

Met Ala Arg Gln Phe Phe Val Gly Gly Asn Phe Lys Ala Asn Gly Thr

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10

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Lys Gln Gln Ile Thr Ser Ile Ile Asp Asn Leu Asn Lys Ala Asp Leu
20 25 30

Pro Lys Asp Val Glu Val Val Ile Cys Pro Pro Ala Leu Tyr Leu Gly
35 40 45

Leu Ala Val Glu Gln Asn Lys Gln Pro Thr Val Ala Ile Gly Ala Gln
50 55 60

Asn Val Phe Asp Lys Ser Cys Gly Ala Phe Thr Gly Glu Thr Cys Ala
65 70 75 80

Ser Gln Ile Leu Asp Val Gly Ala Ser Trp Thr Leu Thr Gly His Ser
85 90 95

Glu Arg Arg Thr Ile Ile Lys Glu Ser Asp Glu Phe Ile Ala Glu Lys
100 105 110

Thr Lys Phe Ala Leu Asp Thr Gly Val Lys Val Ile Leu Cys Ile Gly
115 120 125

Glu Thr Leu Glu Glu Arg Lys Gly Gly Val Thr Leu Asp Val Cys Ala
130 135 140

Arg Gln Leu Asp Ala Val Ser Lys Ile Val Ser Asp Trp Ser Asn Ile
145 150 155 160

Val Val Ala Tyr Glu Pro Val Trp Ala Ile Gly Thr Gly Leu Ala Ala

165

170

175

Thr Pro Glu Asp Ala Glu Glu Thr His Lys Gly Ile Arg Ala His Leu

180

185

190

Ala Lys Thr Ile Gly Ala Glu Gln Ala Glu Lys Thr Arg Ile Leu Tyr

195

200

205

Gly Gly Ser Val Asn Gly Lys Asn Ala Lys Asp Phe Lys Asp Lys Ala

210

215

220

Asn Val Asp Gly Phe Leu Val Gly Gly Ala Ser Leu Lys Pro Glu Phe

225

230

235

240

Val Asp Ile Ile Lys Ser Arg Leu

245

<210> 43

<211> 550

<212> PRT

<213> Candida albicans

<400> 43

Met Ser Leu Asp Asn Ser Thr Glu Asn Arg Asp Leu Glu Glu Lys Glu

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25

30

Asn Glu His Ile Pro Thr Leu Glu Asp Lys Pro Leu Lys Glu Tyr Ile

35

40

45

Gly Ile Ser Ile Leu Cys Phe Leu Ile Ala Phe Gly Gly Phe Val Phe

50

55

60

Gly Phe Asp Thr Gly Thr Ile Ser Gly Phe Ile Asn Met Thr Asp Phe

65

70

75

80

Leu Glu Arg Phe Gly Gly Thr Lys Ala Asp Gly Thr Leu Tyr Phe Ser

85

90

95

Asn Val Arg Thr Gly Leu Leu Ile Gly Leu Phe Asn Val Gly Cys Ala

100

105

110

Ile Gly Ala Leu Phe Leu Ser Lys Val Gly Asp Met Tyr Gly Arg Arg

115

120

125

Val Gly Ile Met Thr Ala Met Ile Ile Tyr Ile Val Gly Ile Ile Val

130

135

140

Gln Ile Ala Ser Gln His Ala Trp Tyr Gln Ile Met Ile Gly Arg Ile

145

150

155

160

Ile Thr Gly Leu Ala Val Gly Met Leu Ser Val Leu Cys Pro Leu Phe

165

170

175

Ile Ser Glu Val Ser Pro Lys His Leu Arg Gly Thr Leu Val Tyr Cys

180

185

190

Phe Gln Leu Met Ile Thr Leu Gly Ile Phe Leu Gly Tyr Cys Thr Ser

195

200

205

Tyr Gly Thr Lys Lys Tyr Ser Asp Ser Arg Gln Trp Arg Ile Pro Leu

210

215

220

Gly Leu Cys Phe Ala Trp Ala Leu Cys Leu Leu Gly Gly Met Val Arg

225

230

235

240

Met Pro Glu Ser Pro Arg Tyr Leu Val Gly Lys Asp Arg Ile Asp Asp

245

250

255

Ala Lys Ile Ser Leu Ala Lys Thr Asn Lys Val Ser Pro Glu Asp Pro

260

265

270

Ala Leu Tyr Arg Glu Leu Gln Leu Ile Gln Ala Gly Val Glu Arg Glu

275

280

285

Arg Leu Ala Gly Lys Ala Ser Trp Gly Ala Leu Ile Thr Gly Lys Pro

290

295

300

Arg Ile Leu Glu Arg Val Ile Val Gly Gly Met Leu Gln Ser Leu Gln

305

310

315

320

Gln Leu Thr Gly Asp Asn Tyr Phe Phe Tyr Tyr Ser Thr Thr Ile Phe

325

330

335

Lys Ser Val Gly Leu Asn Asp Ser Phe Glu Thr Ser Ile Ile Leu Gly

340

345

350

Val Ile Asn Phe Ala Ser Thr Phe Val Gly Ile Tyr Ala Ile Glu Arg

355

360

365

Leu Gly Arg Arg Leu Cys Leu Leu Thr Gly Ser Val Ala Met Ser Ile

370

375

380

Cys Phe Leu Ile Tyr Ser Leu Ile Gly Thr Gln His Leu Tyr Ile Asp

385

390

395

400

Gln Pro Gly Gly Pro Thr Arg Lys Pro Asp Gly Asn Ala Met Ile Phe

405

410

415

Ile Thr Ala Leu Tyr Val Phe Phe Phe Ala Ser Thr Trp Ala Gly Gly

420

425

430

Val Tyr Ser Ile Val Ser Glu Leu Tyr Pro Leu Lys Val Arg Ser Lys

435

440

445

Ala Met Gly Phe Ala Asn Ala Cys Asn Trp Leu Trp Gly Phe Leu Ile

450

455

460

Ser Phe Phe Thr Ser Phe Ile Thr Asp Ala Ile His Phe Tyr Tyr Gly

465

470

475

480

Phe Val Phe Met Gly Cys Leu Val Phe Ser Ile Phe Phe Val Tyr Phe

485

490

495

Met Ile Tyr Glu Thr Lys Gly Leu Thr Leu Glu Glu Ile Asp Glu Leu

500

505

510

Tyr Ser Thr Lys Val Val Pro Trp Lys Ser Ala Gly Trp Val Pro Pro

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520

525

Ser Asp Glu Glu Met Val Arg Ala Lys Gly Tyr Thr Gly Asp Ile His

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535

540

Ala Asp Glu Glu Gln Val

545

550

<210> 44

<211> 508

<212> DNA

<213> Candida albicans

<400> 44

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 atacgtagta cacatagttt acggctac 508

<210> 45

<211> 863

<212> DNA

<213> Candida albicans

<400> 45

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 caatgaacaa ctagggcaaa cag 863

<210> 46

<211> 925

<212> DNA

<213> *Candida albicans*

<400> 46

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<210> 47

<211> 78

<212> PRT

<213> *Candida albicans*

<400> 47

Met Gly Ala Thr Cys Pro Leu Arg Lys Val Ala Thr His Arg Asn Gly

1

5

10

15

Leu Pro Ile Trp Glu Ala Ser Arg Ala Thr Arg Ala Thr Lys Val Leu

20

25

30

Trp Glu Ser Trp Val Gln Tyr Thr Leu Leu Arg Asn Glu Leu Pro Ile

35

40

45

Arg Glu Ala Ser Arg Ala Thr Arg Ala Arg Phe Gln Leu Pro Ile Arg

50

55

60

Glu Ala Ser Arg Ala Thr Arg Ala Gly Phe Gln Leu Pro Ile

65

70

75

<210> 48

<211> 81

<212> PRT

<213> Candida albicans

<400> 48

Met Gly Tyr Arg Phe Gly Lys Leu Val Gly Leu Pro Glu Leu Pro Lys

1

5

10

15

Tyr Cys Gly Arg Val Gly Tyr Ser Thr His Cys Tyr Ala Met Ser Tyr

20

25

30

Gln Phe Gly Lys Leu Val Gly Leu Pro Glu Leu Gly Ser Ser Tyr Gln

35

40

45

Phe Gly Lys Leu Val Glu Leu Pro Glu Ser Gly Ser Ser Tyr Arg Phe

50

55

60

Arg Lys Cys Val Ala Ser Arg Ala Thr Lys Tyr Gly Trp Gln His Ile

65

70

75

80

Trp

<210> 49

<211> 759

<212> DNA

<213> *Candida albicans*

<400> 49

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cgagtgggga gagtctggaa gtgatataca catcacgacc tactttatac gctacgttcg 660
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759

<210> 50

<211> 902

<212> DNA

<213> *Candida albicans*

<400> 50

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 aacattccat ttcttaatgg tagtgtcaaa ttgtattcga taattctacg taccaatggg 300
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<210> 51

<211> 233

<212> PRT

<213> Candida albicans

<400> 51

Met Ser Cys Glu Asp Glu His His Asn His Asn His Gly His Asn Gln

1 5 10 15

Asn His Asn His Val Ala Pro Ile Pro Thr Thr Ala Gly Gln Ser Leu

20 25 30

Asn Asn Lys Ile Asp Thr Ser Lys Val Thr Ala Leu Asn Met Ala Asn

35 40 45

Ser Ala Asp Asp Leu Ala Lys Val Phe Lys Asp Ser Thr Lys Lys Tyr

50 55 60

Gln Ile Lys Pro Ile Ile Lys Ser Asp Ser Asp Glu Gln Met Ile Ile

65 70 75 80

Asn Ile Pro Phe Leu Asn Gly Ser Val Lys Leu Tyr Ser Ile Ile Leu

85 90 95

Arg Thr Asn Gly Asp Leu Tyr Cys Pro Lys Thr Ile Lys Leu Phe Lys

100 105 110

Asn Asp Thr Ser Ile Asp Phe Asp Asn Val Asp Ser Lys Lys Pro Ile

115 120 125

Gln Val Leu Thr His Pro Gln Val Gly Val Ala Asn Asn Asp Ser Asp

130 135 140

Asp Leu Pro Glu Phe Leu Glu Ser Asn Asn Asp Asp Asp Phe Val Glu
 145 150 155 160

His Tyr Val Ser Arg His Lys Phe Thr Gly Val Asn Gln Leu Thr Ile
 165 170 175

Phe Ile Glu Asp Ile Tyr Asp Glu Gly Glu Glu Glu Cys His Leu His
 180 185 190

Ser Ile Glu Leu Arg Gly Glu Phe Thr Glu Leu Asn Lys Asp Pro Val
 195 200 205

Ile Thr Leu Tyr Glu Ser Ala Ala Asn Pro Ala Asp His Lys Asn Leu
 210 215 220

Thr Ile Val Glu Asn Gln Asn Leu Ala
 225 230

<210> 52

<211> 1833

<212> DNA

<213> Candida albicans

<400> 52

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<210> 53

<211> 610

<212> PRT

<213> Candida albicans

<400> 53

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20 25 30

Ser Ile Pro Ala Ser Thr Ser Glu Asp Glu Asp Glu Leu Asp Pro Glu

35 40 45

Glu Phe Ile Leu Asn Lys Val Asp Lys Pro Ala Thr Lys Asp Ser His

50 55 60

Val Ser Tyr Asn Lys Phe Ser Asp Lys His Ile Ser Asp Glu Gln Leu

65 70 75 80

Ser His Leu Leu Asp Asn His Lys Pro Asn Leu Val Thr Thr Thr Thr

85 90 95

Leu Ile Asp Ser Ile Lys Glu Ser Glu Ser Leu Tyr Asn Thr Met Asp

100 105 110

Ser Leu Met Ile Lys Ser Ile Asn Phe Pro Ala Ala Met Tyr Gln Ser
115 120 125

Asn Asp Asn Asn Ser Gln Ser Pro Ile Glu Tyr Leu Ser Asn Arg Val
130 135 140

Lys Leu Leu Thr Gln Glu Leu Tyr Glu Asp Ser Val Lys Tyr Gly Lys
145 150 155 160

Phe Leu Gln Ser Gly Asn Asn His Ile Tyr Gln Leu Arg Ser Arg Ile
165 170 175

Leu Gln Thr Phe Asp Gln Leu Ser Glu Ser His Tyr Ser Leu Asn Glu
180 185 190

Leu Tyr Asn Lys Asp Met Ser Tyr Ala Glu Thr Leu His Gly Ser Phe
195 200 205

Lys Lys Trp Asp Gln Gln Arg Asn Lys Val Leu Ser Lys Val Lys Ser
210 215 220

Ile Lys Ser Asp Thr Ser Lys His Gly Ala Lys Leu Phe Thr Leu Leu
225 230 235 240

Asp Glu Val Asn Asp Val Asp Asp Glu Ile Lys Leu Leu Glu Ala Lys
245 250 255

Leu Gln Gln Leu Arg Ser Lys Lys Glu Ile Leu Asn Lys Glu Ile Glu
260 265 270

Asp Thr Ser Ser Val Leu Glu Ser Arg Thr Ala Lys Tyr Val Asp Ile
275 280 285

Phe Lys Asp Leu Glu Asn Lys Gly Arg Ser Ala Ile Thr Asp Phe Leu
290 295 300

Gln Ser Asn Gly Val Pro Glu Lys Glu Ile Asp Thr Ile Val Arg Phe
305 310 315 320

Ser Pro Val Asp Ile Thr Ile Ser Ser Asn Tyr Ser Ser Lys Lys Glu
325 330 335

Pro Lys Lys Glu Ile His Ile Thr Lys Glu Ser Ile Pro Gln Asn Glu
340 345 350

Ser Ala Ser Lys Pro Ala Asn Thr Pro Ser Ile Gly Met Gln Pro Phe
355 360 365

Ile Ile Pro Glu Ala Glu Ala Asn Thr Lys Thr Pro Asp Leu Gln Ser
370 375 380

Met Asn His Asp His Gly Pro Thr Pro Phe Glu Lys Gly Tyr Ala Met
385 390 395 400

Gly Thr Gln Asn Ser Thr Ala Leu Lys Asn Lys Met Asn His Ile Met
405 410 415

Lys Lys Phe Leu Asp Ser Leu Pro Ile Thr Pro Pro Ser Asn Ile Ser

420

425

430

Thr Met Pro Ala Thr Ser Arg Ile Lys Val Asp Asp Leu Ser Asn Thr

435

440

445

Ile Ser Lys Arg Leu Asp Leu Asp Pro Ile Met Val Phe Leu Glu His

450

455

460

Lys Val Ala Ala Leu His Asp Leu Ala Ile Lys Ser Ser Gln Asn Ala

465

470

475

480

Ala Leu Phe His Glu Phe Gly Arg Ile Trp Glu Ser Val Thr Lys Leu

485

490

495

Met Asn Ser Gln Glu Glu Lys Leu Glu Ser Ile Leu Asn Asp Asp Ser

500

505

510

Asn Ser Lys Leu Val Thr Arg Ile Leu Asn Ser Thr Leu Glu Gln Leu

515

520

525

Lys Ser Thr Leu Ser Ala Leu Lys Ser Asn Pro Val Thr Ser Gly Ser

530

535

540

Pro Arg Asp Glu Val Leu Ile Ser Leu Ile Thr Ser Glu Tyr Asn Ala

545

550

555

560

Ile Glu Gln Ala Val Lys Leu Val Ser Pro Asp Leu Arg Thr Ile Gly

565

570

575

Glu Leu Asn Ser Ser Gly Gly Leu Pro Pro Ser Ser Ser Lys Pro Thr

580

585

590

Ser Gln Val Tyr Pro Val Ser Thr Ser Asp Thr Lys Ser Thr Thr Lys

595

600

605

Met Glu

610

<210> 54

<211> 75

<212> PRT

<213> Candida albicans

<400> 54

Met Ser Thr Tyr Phe Ala Val Ser Leu Ser Lys Thr Ser Ser Val Ser

1

5

10

15

Ser Ile Ser Leu Phe Lys Ile Ser Phe Leu Asp Arg Ser Cys Cys Ser

20

25

30

Phe Ala Ser Lys Ser Leu Ile Ser Ser Ser Thr Ser Leu Thr Ser Ser

35

40

45

Asn Lys Val Asn Asn Leu Ala Pro Cys Leu Leu Val Ser Leu Phe Ile

50

55

60

Asp Phe Thr Leu Asp Asn Thr Leu Phe Leu Cys

65

70

75

<210> 55

<211> 1164

<212> DNA

<213> *Candida albicans*

<400> 55

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<210> 56

<211> 297

<212> PRT

<213> Candida albicans

<400> 56

Met Ser Thr Ile Thr Ile Pro His Asp Ile Glu Ile Gly Gly Ser Thr

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10

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Tyr Tyr Gln Ile Asn Ile Lys Leu Pro Leu Arg Ser Phe Thr Ile Lys

20

25

30

Lys Arg Tyr Ser Glu Phe Gln Gln Leu Val Ser Asp Leu Ser Arg Asn

35

40

45

Leu Gly Ile Asp Ser Arg Asp Phe Pro Tyr Glu Leu Pro Gly Lys Arg

50

55

60

Ile Asn Trp Leu Asn Lys Thr Ser Ile Val Glu Glu Arg Lys Val Gly

65

70

75

80

Leu Ala Glu Phe Leu Asn Asn Leu Ile Gln Asp Ser Thr Leu Gln Asn

85

90

95

Glu Arg Glu Val Leu Ser Phe Leu Gln Leu Pro Ser Asn Phe Arg Phe

100

105

110

Thr Lys Asp Met Leu Gln Asn Asn Arg Ala Asp Leu Asp Ser Val Gln

115

120

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Asn Asn Trp Tyr Asp Val Tyr Arg Lys Leu Lys Ser Asp Ile Leu Asn

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135

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Glu Ser Ser Ser Ser Ile Ser Glu Gln Ile His Ile Arg Asp Arg Ile

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150

155

160

Ser Arg Val Tyr Gln Pro Arg Ile Leu Asp Leu Val Arg Ala Ile Gly

165

170

175

Thr Asp Lys Glu Glu Ala Leu Lys Lys Lys Gln Leu Val Ser Gln Leu

180

185

190

Gln Glu Ser Ile Asp Asn Leu Leu Val Gln Glu Val Pro Arg Ser Lys

195

200

205

Arg Val Leu Gly Gly Ala Val Lys Glu Thr Pro Glu Thr Leu Pro Leu

210

215

220

Asn Asn Lys Glu Leu Leu Gln His Gln Val Gln Ile His Gln Asn Gln

225

230

235

240

Asp Lys Glu Leu Asp Gln Leu Arg Val Leu Ile Ala Arg Gln Lys Gln

245

250

255

Ile Gly Glu Leu Ile Asn Ala Glu Val Glu Glu Gln Asn Glu Met Leu

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265

270

Asp Arg Phe Asn Glu Glu Val Asp Tyr Thr Ser Ser Lys Ile Lys Gln

275

280

285

Ala Arg Arg Arg Ala Lys Lys Ile Leu

290

295

<210> 57

<211> 7707

<212> DNA

<213> Candida albicans

<400> 57

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Leu Thr Gly Phe His Leu Ser Thr Ile Thr Ile Asn Asn Gly Ile Ser

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Phe Asn Gly Ile Ser Phe His Thr Lys Arg Tyr Leu Ile Ser Val Gly

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Ser Leu Arg Phe Arg Leu Trp Gly Asn Ser Lys Met Thr Ile Ile Asp

65 70 75 80

Asp Leu Thr Ile Lys Leu Leu Pro Asn Val Lys Asn Asn Gln Lys Gln

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Asn Thr Gln Glu Lys Arg Asn Asp Tyr Ser Phe Lys Asp Pro Thr Ala

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105

110

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Lys Phe Thr Thr Ser Ser Lys Tyr Ser Lys Arg Ser Asn Glu Lys Ile
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Asn Asp Val Arg Pro Ala Thr Cys Leu Glu Met Met Thr Lys Ser Thr

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Ser Phe Asn Phe Ser Arg Met Tyr Ser Asp Ala Ala Gly Phe Glu Val

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Leu Phe Asn Ser Lys Arg Asp Arg Pro Tyr His Leu Thr Cys Ser Val

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360

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Gln Leu Leu Lys Val Phe Phe Ala Ser Arg Val Glu Leu Pro Thr Gly

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Phe Lys Asn Cys Val Val Glu Ile Tyr Phe Ser Ala Ser Thr Pro Ile

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Leu Leu Lys Lys Trp Lys Thr Ile Lys Lys Leu Glu Lys Leu Leu Glu

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Lys Thr Pro Thr Ser Ser Ser Asp Leu Gln Asp Asp Asp Phe Asp Gly

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Ser Glu Thr Ser Asn Leu Lys Ile His Pro Gly Thr Pro His His Lys

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Glu Lys Ile Asn Ala Arg Ile Trp Arg Tyr Leu Thr Asp Tyr Tyr Pro

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Ser Asp Val Ser Asp Leu His Gly Lys Glu Leu Val Thr Lys Arg Val

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Ala His Thr Ser Tyr Ile Asp Ile Lys Leu Glu Ile Phe Lys Asn Leu

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600

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Thr Val Lys Leu Leu Val Asp Val Asp Lys Val Thr Ile Asp Leu Thr

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Asn Leu Asp Ile Phe Thr Gly Ile His Asn Leu Leu Leu Asp Val Thr

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Gln Ile Ala Glu Thr Asp Leu Glu Leu Gly Val Ile Asn Lys Met Leu

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Ser Tyr Phe Lys Lys Asn Ile Lys Pro Thr Leu Glu Gln Lys Leu Phe

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Thr Lys Phe Asp Ser Asn Leu Ser Pro Asp Pro Asn Ala Ala His Lys

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Leu Asn Ala Met Gln Ala Ala Tyr Arg Asp Arg Thr Ala Asp Leu Ser

930 935 940

Ile Thr Phe Leu Arg Gly Leu Ala Glu Ser Pro Leu Val Ala Asn Lys

945 950 955 960

Trp Cys Arg Leu Leu Cys Leu Asp Thr Leu Lys Phe Lys Ser Glu Ile

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Thr Ser Ser Ile Lys Asp Leu Ser Ile Glu Leu Asp Ser Asp Ala Val

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Pro Arg Asn Lys Asp Met Asp Glu Thr Ser Phe Lys Leu Asn Gly His

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1645

Tyr His Glu Glu Leu Ser Lys Asn Glu Lys Val Met Lys Met Asn Phe

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1660

Asp Leu Gly Glu Val Val Leu Ser Gly Ile Asp Leu Arg Val Met His

1665

1670

1675

1680

Val Ser Phe Leu Gln Asn Leu Tyr Thr Gln Ser His Ser Asn Ser Gly

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1690

1695

Asp Ala Lys Ser Thr Tyr Asn Ile Tyr Asp Asn Asp His Arg Trp Phe

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1760

Gly Lys Glu Val Ile His Lys Cys Asn Leu Gly Ala Met Asn Pro Leu

1765

1770

1775

Glu Thr Arg Leu Asn Val Leu Val Gln Arg Leu Asn Ala Leu Gln Glu

1780

1785

1790

Gln Val Lys Lys Leu Ser Lys Thr Ser Ala Pro Glu Pro Val Ala Asp

1795

1800

1805

Leu Lys Lys Arg Ile Ser Phe Leu Gln Lys Glu Ile Ser Thr Thr Lys

1810

1815

1820

Ala Ser Val Lys Ser Lys Met Arg Arg Thr Ser Thr Ile Asn Gly Met

1825

1830

1835

1840

Asn Asn Ser Glu Asn Tyr His Asn Lys Phe Thr Phe Tyr Asn Met Leu

1845

1850

1855

Leu Lys Trp Asn Phe Asn Cys Arg Asn Leu Thr Leu Lys Tyr Ile His

1860

1865

1870

Phe Val Lys Leu Lys Ser Gln Leu Arg Asn Tyr Leu Ser His Lys Ser

1875

1880

1885

Ile Glu Thr Leu Glu Lys Met Met Asp Ser Val Asn Ala Tyr Asn Asp

1890

1895

1900

Lys Asp Asp Leu Ser Ser Thr Ser Glu Ile Ile Arg Arg Phe Thr Ser

1905

1910

1915

1920

Glu Gly Val Lys Ser Gln Thr Ser Thr Ser Lys Asp Ile Thr Ser Gln

1925

1930

1935

Gln Lys Leu Asp Asn Phe Asn Thr Ile Leu Arg Glu Thr Arg Pro Asp

1940

1945

1950

Glu Lys Val Val Glu Asp Tyr Leu Ile Asp Val Ile Ala Pro Gln Ile

1955

1960

1965

Gln Leu Gln Ser Glu Asp Tyr Pro Asp Ser Val Val Leu Ile Ser Thr

1970

1975

1980

Pro Ser Ile Lys Gly Lys Ile Leu Ser Ile Met Asp Ser Arg Asn Asn

1985

1990

1995

2000

Ala Asn Gln Ile Leu Leu Glu Thr Arg Tyr Gly Ile Leu Leu Lys Asp

2005

2010

2015

Ala Asn Val Phe Val Leu Asn Lys Glu Asp Ile Val Gly Cys Pro Asp

2020

2025

2030

Met Leu Ser Ile Ser Asn Pro Tyr Gly Ala Lys Ser Asn Trp Pro Pro

2035

2040

2045

Trp Leu Gly Thr Glu Ile Thr Gln Asn Gly Lys Trp Ala Gly Ala Asn

2050

2055

2060

Asn Leu Leu Ile Glu Lys Leu Ser Val Met Thr Met Cys Tyr Glu Ser

2065

2070

2075

2080

Glu Ile Leu Ser Ser Lys Leu Ser Pro Asn Ala Gln Asp Ser Asp Gln

2085

2090

2095

Glu Glu Gln Glu Asn Tyr Asn Asp Asp Asn Ser Lys Gln Ala Pro Leu

2100

2105

2110

Arg Leu Gly Ile Asp Met Pro Ser Val Val Ile Thr Ser Thr Ser Ser

2115

2120

2125

Gln Tyr Phe Thr Leu Tyr Val Ile Ile Val Ser Leu Leu Phe Tyr Ser

2130

2135

2140

Glu Pro Met Ser Lys Val Ile His Lys Lys Ile Glu Lys Met Lys Phe

2145

2150

2155

2160

Ser Ile Asp Phe Glu Asp Leu Gly Ala Leu Thr Ser Arg Leu Thr Lys

2165

2170

2175

Met Gln Gln His His Lys Leu Leu Lys Val Leu Ser Asn Asn Tyr Ser

2180

2185

2190

Phe Arg Gln Gly Lys Leu Asn Asn Glu Asp Leu Asn Asn Tyr Leu Gln

2195

2200

2205

Val Asn Leu Glu Arg Gly Glu Ile Ala Ser Asp Ile Tyr Leu Leu Leu

2210

2215

2220

Arg Thr Leu Leu Thr Gly Asp Phe Ala Ser Asp Thr Ser Asn Asn Leu

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Glu Asp Asp Arg Thr Pro Ile Met Asp Leu Ala Leu Ala Gln Gly Met
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Tyr Thr Arg Lys Glu Leu Glu Ser Gly Ser Asn Ile Asn Lys Leu His
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Ile Gly Thr Met Arg Gly Phe Asn Leu Ile Glu Ser Ala Arg Tyr Pro
 2290 2295 2300
Asp Phe Ile Lys Pro Ile Thr Glu Ser Ser Ser Gln Asn Leu Ile Glu
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Ser Asn Met Lys Arg Ser Leu Thr Met Leu Ser Ser Lys Lys Ser Ser
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Ser Ser Ala Ser Ser Asn Asp Glu Ile Glu Asp Asn Glu Asp Val Glu
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Lys Met Ile Glu Arg Ser Lys Lys Tyr Phe Ser Val Val Ser Leu Asn
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Val Asn Ala Ile Thr Leu Glu Val Thr Leu Lys Leu Asn Lys Gly Phe
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Lys Arg Ile Leu Asn Val Asn Asp Phe Arg Ile Asp Leu Pro Glu Phe
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Asn Ile Thr Asn Glu Ile Val Ser Tyr Met Asp Ile Ser Lys Met Leu
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Gln Ser Met Ile Thr Lys Met Ile Leu Gly His Val Gly Arg Leu Leu
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Gly Asn Lys Met Lys Ala Thr Lys Gly Lys Ser Lys Lys Ile Met Lys

2530

2535

2540

Lys Arg Lys Arg Ile Arg Ser Ile Ser Asp Val Arg Lys Glu Ile His

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2550

2555

2560

Val Ser Thr Glu Arg Gly Ala Asp

2565

<210> 59

<211> 2196

<212> DNA

<213> Candida albicans

<400> 59

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<210> 60

<211> 731

<212> PRT

<213> *Candida albicans*

<400> 60

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20 25 30

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35 40 45

Phe Val Gln Asp Leu Phe Gln Ser Arg Phe Thr Pro Tyr Val Lys Phe

50 55 60

Lys Ile Val Thr Asp Pro Ala Ser Asn Ile Leu Glu Thr His Val Ile

65 70 75 80

Arg Gln Val Ala Phe Val Glu Leu Glu Ser Ala Ser Asp Met Ser Lys

85 90 95

Ala Leu Lys Trp His Asp Leu Tyr Tyr Lys Thr Asn Arg Arg Val Thr

100 105 110

Val Glu Val Ala Asp Phe Asn Asp Phe Gln Asn Cys Ile Lys Phe Asn

115 120 125

Gln Glu His Glu Arg Glu Ile Met Gln Ile Gln Gln Glu Phe Ile Ala

130 135 140

Gln Lys Gln Gln Gln Arg Gln Pro Arg His Met Ala Leu Leu Asp Glu
145 150 155 160

Phe Glu Arg Asn Gln Arg Gly Pro Gly Ser Pro Leu His Gln Asn His
165 170 175

Asp His His Asn Pro His Pro Gln Gln Gln Gln His His His Phe Asn
180 185 190

Pro Asn Leu Asn Arg Pro Ser Gly Arg Ser Ser Leu Pro Ile Asp Glu
195 200 205

Thr Ser His Ser Arg Arg Leu Ser Phe Glu Ala Gln Leu His Pro His
210 215 220

Gln Gln Thr His Gly Gln Arg Ile Arg Gln Pro Ser Phe Asp Asn Ala
225 230 235 240

Phe Pro Asp Thr Pro His Pro Pro Phe Gly Gly Gly Gly Gly Met Arg
245 250 255

Gln Gln Ile His Pro Thr Asn Gln Pro Ala Val Pro Ser Ser Ala Pro
260 265 270

Ala Ser Lys Pro Phe Val Thr Pro Ile Ser Ser Ala Ser Thr Ser Ser
275 280 285

Arg Pro Ile Ser Asn Pro Phe Gly Ala Ala Lys Pro Val Asp Thr Leu



Ser Leu Ala Gln Leu Leu Ser Glu Gln Ser Asp Ile Met Ser Ala Pro

450

455

460

Pro Ile Thr Gly Lys Lys Thr Pro Arg Ser Asn Ser Asn Thr Lys Lys

465

470

475

480

Pro Val Val Ala Ala Lys Pro Val Ile Leu Lys Lys Lys Thr Pro Thr

485

490

495

Ser Pro Pro Val Gln Arg Ile Asp Leu Thr Ile Lys Glu Ser Glu Tyr

500

505

510

Leu Lys Lys Gln Asp Glu Thr Asp Asp Leu Ile Asp Ala Asn Val Glu

515

520

525

Thr Lys Leu Glu Lys Leu Asp Leu Asn Ser Glu Thr Leu Ser Glu Asn

530

535

540

Gly Thr Lys Glu Ser Thr Lys Thr Arg Ile Asp Asn Pro Lys Arg Glu

545

550

555

560

Asn Asp Gln His Asp Asp Arg Pro Asn Phe Lys Asn Leu Asp Gln Leu

565

570

575

Val Gln Lys Arg Asn Asp Ser Arg Ala Ser Ser Ser Ser Ser Asn Ser

580

585

590

Arg Arg Phe Glu Phe Ile Arg Gly Leu Lys Glu Glu Asn Glu Arg Val

595

600

605

Pro Ser Pro Ser Ser Ser Ser Ser Ser Ser Ala Thr Lys Thr Ser

610

615

620

Gln Asn Asn Phe Glu Lys Ser Ser Glu Ser Ala Ile Ser Arg Thr Asp

625

630

635

640

Asp Gln Gln Asp Leu Ser Ser Thr Asn Thr Gly Ser Glu Gly Arg Met

645

650

655

Trp Glu Arg Gly Arg Gly Arg Gly Arg Gly Gly Phe Ser Phe Arg Ser

660

665

670

Arg Gly Gly Phe Arg Gly Arg Gly Ala Gly Phe Arg Gly Ser Gly Arg

675

680

685

Gly Gly Pro Arg Arg Arg Gly Gly Asn Gly Ala Ser Gly Ala Gly Gly

690

695

700

Thr Ala Ser Gly Ser Thr Gly Ser Ala Asn Tyr Asn Leu His Tyr Val

705

710

715

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Arg Ser Lys Pro Thr Pro Val Glu Thr Asn Glu

725

730

<211> 1483

<212> DNA

<213> *Candida albicans*

<400> 61

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1483

<210> 62

<211> 468

<212> PRT

<213> Candida albicans

<400> 62

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25

30

Leu Arg Ser Val Leu Thr Thr Leu Ile Glu Leu Leu Gly Ile Asp Asn

35

40

45

Pro Pro Ser Tyr Leu His Leu Thr Thr Asn Asn Asp Ser Ile Gly Asp

50

55

60

Leu Lys Ile Lys Tyr Tyr Gly Asn Ala Leu Ser Lys Ser Ile Asn Gly

65

70

75

80

His Ser Met Leu Gln Tyr Leu Glu Ser Lys His Val Ser Ile Leu Gln

85

90

95

Ala Val Val Glu Ile Ile Asn Thr Arg Ser Tyr Arg Ile Lys Glu Ser

100

105

110

Tyr Ser Ala Val Phe Lys Asp Val Ser His Leu Phe Glu Lys Leu Leu

115

120

125

Lys Glu Arg Tyr Glu Ala Glu Ser Asn Leu Glu Asp Tyr Ile Leu Gln

130

135

140

Cys Leu Met Tyr Glu Thr Gln Phe Tyr Gln Gly Ile Val Asp Asn Val

145

150

155

160

Leu Thr Ala Asp Asp Thr Glu Lys Leu Ala Ser Phe Leu Gly Thr Arg

165

170

175

Leu Ser Glu Glu Asp Ser Met Phe Ser Tyr Arg Asp Ile Asp Tyr Pro

180

185

190

Leu Glu Leu Asn Ile Asn Asn Glu Ser Leu Glu Lys Ile Tyr Lys Ile

195

200

205

Phe Leu Gly Val Ile Gly Thr Lys Arg Phe Asp Ile Lys Glu Val Ala

210

215

220

Ser Ala Val Val Gly Val Tyr Lys Arg His Gln Arg Ile Asp His Phe

225

230

235

240

Glu Lys Leu Asp Ser Asp Glu Ile Leu Gly Lys Phe Phe Arg Asn Ile

245

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255

Leu Pro Gln Ser Phe Gln Ser Val Thr Asn Lys Val Phe Arg Glu Phe

260

265

270

His Lys Glu Val Asp Asp Pro Pro Ser Asp Val Leu Asp Gln Leu Asp

275

280

285

Asn Ile Val Asp Asp Phe Ile Ala Val Gly Ile Glu Gly Val Asp Leu

290

295

300

Gly Phe Pro Ala Leu Phe Arg His Tyr Ile Lys Phe Met Asn Glu Ile

305

310

315

320

Phe Pro Thr Val Val Glu Asp Ala Asp Arg Asp Phe Val Ala Arg Ile

325

330

335

Asn Ser Leu Ile Ala Gln Val Leu Glu Phe Lys Asp Asp Glu Lys Ser

340

345

350

Cys Asp Ile Asn Gln Val Val Ser Glu Phe Val Ser Leu Gln Ser Leu

355

360

365

Leu Leu Lys Asn Asn Tyr Leu Ser Pro Ser Thr Leu Leu Met Arg Ala

370

375

380

Ser Thr His Asp Tyr Tyr Lys Asn Leu Gln Ile Val Lys Ile Thr Phe

385

390

395

400

Asp Gly Trp Asn Glu Asn Ser Lys Arg Ile Leu Lys Leu Glu Asn Ser

405

410

415

Gly Phe Leu Gln Ser Lys Thr Leu Pro Lys Tyr Leu Lys Leu Trp Tyr

420

425

430

Ser Lys Ser Met Lys Leu Asn Glu Leu Cys Asn Arg Val Asp Glu Phe

435

440

445

Tyr Asn Gly Glu Leu Cys Arg Lys Val Trp His Cys Trp Arg Ala Gln

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455

460

Gln Arg Cys Leu

465

<210> 63

<211> 715

<212> DNA

<213> Candida albicans

<400> 63

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<210> 64

<211> 106

<212> PRT

<213> Candida albicans

<400> 64

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 35 40 45

Leu Gln Glu Glu Arg Lys Pro Glu Asp Glu Asn Asp Ile Arg Pro Thr
 50 55 60

Lys Lys Lys Gly Ile Asn Phe Glu Glu Arg Ala Ala Ile Val Lys Gln
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Leu Glu Lys Ile Glu Ser Asn Ser Lys Glu

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<210> 65

<211> 147

<212> DNA

<213> Candida albicans

<400> 65

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<210> 66

<211> 49

<212> PRT

<213> Candida albicans

<400> 66

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1

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10

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Cys Ile Arg Asn Ile Cys Ile Leu Ala His Val Asp His Gly Lys Thr

20

25

30

Ser Leu Ser Asp Ser Leu Leu Ala Thr Asn Gly Ile Ile Ser Gln Arg

35

40

45

Met

<210> 67

<211> 3393

<212> DNA

<213> *Candida albicans*

<400> 67

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<210> 68

<211> 497

<212> PRT

<213> Candida albicans

<400> 68

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1

5

10

15

Leu Ile Asn Ser Ile Asp Ser Pro Gly His Ile Asp Phe Ser Ser Glu

20

25

30

Val Ser Thr Ser Ser Arg Leu Cys Asp Gly Ala Val Val Leu Val Asp

35

40

45

Val Val Glu Gly Val Cys Ser Gln Thr Val Asn Val Leu Arg Gln Cys

50

55

60

Trp Ile Asp Lys Leu Lys Pro Leu Leu Val Ile Asn Lys Ile Asp Arg

65 70 75 80

Leu Ile Thr Glu Trp Lys Leu Ser Pro Leu Glu Ala Tyr Gln His Ile

85 90 95

Ser Arg Ile Ile Glu Gln Val Asn Ser Val Ile Gly Ser Phe Phe Ala

100 105 110

Gly Asp Arg Leu Glu Asp Asp Leu Asn Trp Arg Glu Ala Gly Ser Val

115 120 125

Gly Glu Phe Ile Glu Lys Ser Asp Glu Asp Leu Tyr Phe Thr Pro Glu

130 135 140

Lys Asn Asn Val Ile Phe Ala Ser Ala Ile Asp Gly Trp Ala Phe Ser

145 150 155 160

Val Asn Thr Phe Ala Lys Ile Tyr Ser Lys Lys Leu Gly Phe Ser Gln

165 170 175

Gln Ala Leu Ser Lys Thr Leu Trp Gly Asp Phe Tyr Leu Asp Met Lys

180 185 190

Asn Lys Lys Ile Ile Pro Gly Lys Lys Leu Lys Asn Asn Ser Asn Ser

195 200 205

Leu Lys Pro Leu Phe Val Ser Leu Ile Leu Asp Gln Val Trp Ala Val

210

215

220

Tyr Glu Asn Cys Val Ile Glu Arg Asn Gln Asp Lys Leu Glu Lys Ile

225

230

235

240

Ile Glu Lys Leu Gly Ala Lys Ile Thr Pro Arg Asp Leu Arg Ser Lys

245

250

255

Asp Tyr Lys Asn Leu Leu Asn Leu Ile Met Ser Gln Trp Ile Pro Leu

260

265

270

Ser His Ala Ile Leu Gly Ser Val Ile Glu Tyr Leu Pro Ser Pro Ile

275

280

285

Val Ala Gln Arg Glu Arg Ile Asp Lys Ile Leu Asp Glu Thr Ile Tyr

290

295

300

Ser Ala Val Asp Ser Glu Ser Asp Lys Ser Lys Leu Val Asp Pro Ser

305

310

315

320

Phe Val Lys Ala Met Gln Glu Cys Asp Ser Ser His Pro Glu Thr His

325

330

335

Thr Ile Ala Tyr Val Ser Lys Leu Leu Ser Ile Pro Asn Glu Asp Leu

340

345

350

Pro Lys Ala Ser Asn Ala Ala Thr Gly Gly Leu Thr Ala Asp Glu Ile

355

360

365

Gln Glu Arg Gly Arg Ile Ala Arg Glu Leu Ala Lys Lys Ala Ser Glu

370

375

380

Ala Ala Ala Leu Ala Gln Glu Gly Ser Lys Asn Glu Asp Glu Phe Ala

385

390

395

400

Ile Lys Pro Lys Lys Asp Pro Phe Glu Trp Glu Phe Glu Glu Asp Asp

405

410

415

Phe Glu Asn Glu Glu Asp Glu Ser Asp Ala Asn Ala Val Glu Glu Ser

420

425

430

Thr Glu Thr Ile Val Gly Phe Thr Arg Ile Tyr Ser Gly Ser Leu Ser

435

440

445

Arg Gly Gln Lys Leu Thr Val Ile Gly Pro Lys Tyr Asp Pro Ser Leu

450

455

460

Pro Arg Asp His Gln Thr Asn Phe Glu Gln Ile Thr Asn Glu Val Glu

465

470

475

480

Ile Lys Asp Leu Phe Leu Ile Met Gly Arg Glu Leu Val Arg Met Glu

485

490

495

Lys

<210> 69

<211> 467

<212> PRT

<213> Candida albicans

<400> 69

Pro Ala Gly Asn Ile Val Gly Val Val Gly Leu Asp Asn Ala Val Leu

1

5

10

15

Lys Asn Ala Thr Ile Cys Ser Pro Leu Pro Glu Asp Lys Pro Tyr Ile

20

25

30

Asn Leu Ala Ser Thr Ser Thr Leu Ile His Asn Lys Pro Ile Met Lys

35

40

45

Ile Ala Val Glu Pro Thr Asn Pro Ile Lys Leu Ala Lys Leu Glu Arg

50

55

60

Gly Leu Asp Leu Leu Ala Lys Ala Asp Pro Val Leu Glu Trp Tyr Val

65

70

75

80

Asp Asp Glu Ser Gly Glu Leu Ile Val Cys Val Ala Gly Glu Leu His

85

90

95

Leu Glu Arg Cys Leu Lys Asp Leu Glu Glu Arg Phe Ala Lys Gly Cys

100

105

110

Glu Val Thr Val Lys Glu Pro Val Ile Pro Phe Arg Glu Gly Leu Ala

190

115

120

125

Asp Asp Lys Ile Ser Thr Asn Thr Asn Asn Asn Asn Asp Asp Asn Glu

130

135

140

Asp His Glu Leu Asp Glu Asn Glu Asp Glu Leu Ala Asp Leu Glu Phe

145

150

155

160

Asp Ile Ser Pro Leu Pro Leu Glu Val Thr Gln Phe Leu Ile Glu Asn

165

170

175

Glu Thr Ile Ile Ala Glu Ile Val Asn Asn Lys Gln Asp Thr His Glu

180

185

190

Ile Arg Asn Asp Phe Ile Glu Lys Phe Ala Thr Ile Ile Asp Asn Ser

195

200

205

Asn Leu Ala Thr Gln Phe Pro Asp Thr Lys Ser Phe Ile Asn Asn Ile

210

215

220

Ile Cys Phe Gly Pro Lys Arg Val Gly Pro Asn Ile Phe Ile Glu Asp

225

230

235

240

Tyr Gly Leu Asn Lys Phe Arg His Leu Leu Gly Glu Ser Ala Thr Glu

245

250

255

Ser Arg Phe Val Tyr Glu Asn Asn Val Phe Asn Gly Val Gln Leu Val

260

265

270

Phe Asn Gly Gly Pro Leu Ala Ser Glu Pro Met Gln Gly Ile Ile Val

275

280

285

Arg Leu Lys Lys Ala Glu Lys Arg Glu Val Asp Glu Asp Lys Ile Val

290

295

300

Asn Pro Gly Lys Ile Ile Thr Gln Thr Arg Asp Leu Ile Tyr Lys Arg

305

310

315

320

Phe Leu Gln Lys Ser Pro Arg Leu Tyr Leu Ala Met Tyr Thr Cys Glu

325

330

335

Ile Gln Ala Ala Ala Glu Val Leu Gly Lys Val Tyr Ala Val Val Gln

340

345

350

Arg Arg Glu Gly Ser Ile Ile Ser Glu Glu Met Lys Glu Gly Thr Pro

355

360

365

Phe Phe Thr Ile Val Ala Arg Ile Pro Val Ile Glu Ala Phe Gly Phe

370

375

380

Ser Glu Asp Ile Arg Lys Lys Thr Ser Gly Ala Ala Ser Pro Gln Leu

385

390

395

400

Val Phe Asp Gly Tyr Asp Met Leu Asp Ile Asp Pro Phe Trp Val Pro

405

410

415

His Thr Glu Glu Glu Leu Glu Glu Leu Gly Glu Phe Ala Glu Arg Glu

420

425

430

Asn Val Ala Arg Arg Tyr Met Asn Asn Ile Arg Arg Arg Lys Gly Leu

435

440

445

Phe Val Asp Glu Lys Val Val Lys Asn Ala Glu Lys Gln Arg Thr Leu

450

455

460

Lys Arg Asp

465

<210> 70

<211> 1340

<212> DNA

<213> Candida albicans

<400> 70

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 cctaaatgtc aaaacttagt tggatctggt gttgttatcc acgttccttc cttctttgct 240
 gaattggaaa acttgggaagc aaaaggggta gattgtcgtg atagattgtt tgtttcatct 300
 agagctcatt tgggtcttga cttccatcaa cgtactgata aattgaaaga agctgaatta 360
 tcaaccaata agaaatcaat aggtactacc ggtaaaggta ttggtccaac ttactcaacc 420
 aaggcaagta gatcaggtat cagagtccac catttagtca accctgatcc agaagcttgg 480
 gaagaattca aaactagata tttgagatta gtcgagagta gacaaaaaag atacggtgaa 540
 tttgaatatg atcctaagga agaattggca agatttgaaa aataccgtga aaccttgaga 600
 ccattcgtcg tcgactccgt caacttcatg cacgaagcta ttgctgccaa taaaaaaatc 660

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<210> 71

<211> 428

<212> PRT

<213> Candida albicans

<400> 71

Met Cys Asp Val Val Leu Gly Ser Gln Trp Gly Asp Glu Gly Lys Gly

1

5

10

15

Lys Leu Val Asp Leu Leu Cys Asp Asp Ile Asp Val Cys Ala Arg Cys

20

25

30

Gln Gly Gly Asn Asn Ala Gly His Thr Ile Val Val Gly Lys Val Lys

35

40

45

Tyr Asp Phe His Met Leu Pro Ser Gly Leu Val Asn Pro Lys Cys Gln

50

55

60

Asn Leu Val Gly Ser Gly Val Val Ile His Val Pro Ser Phe Phe Ala

65

70

75

80

Glu Leu Glu Asn Leu Glu Ala Lys Gly Leu Asp Cys Arg Asp Arg Leu

85

90

95

Phe Val Ser Ser Arg Ala His Leu Val Phe Asp Phe His Gln Arg Thr

100

105

110

Asp Lys Leu Lys Glu Ala Glu Leu Ser Thr Asn Lys Lys Ser Ile Gly

115

120

125

Thr Thr Gly Lys Gly Ile Gly Pro Thr Tyr Ser Thr Lys Ala Ser Arg

130

135

140

Ser Gly Ile Arg Val His His Leu Val Asn Pro Asp Pro Glu Ala Trp

145

150

155

160

Glu Glu Phe Lys Thr Arg Tyr Leu Arg Leu Val Glu Ser Arg Gln Lys

165

170

175

Arg Tyr Gly Glu Phe Glu Tyr Asp Pro Lys Glu Glu Leu Ala Arg Phe

180

185

190

Glu Lys Tyr Arg Glu Thr Leu Arg Pro Phe Val Val Asp Ser Val Asn

195

200

205

Phe Met His Glu Ala Ile Ala Ala Asn Lys Lys Ile Leu Val Glu Gly
210 215 220

Ala Asn Ala Leu Met Leu Asp Ile Asp Phe Gly Thr Tyr Pro Tyr Val
225 230 235 240

Thr Ser Ser Ser Thr Gly Ile Gly Gly Val Leu Thr Gly Leu Gly Ile
245 250 255

Pro Pro Arg Thr Ile Arg Asn Val Tyr Gly Val Val Lys Ala Tyr Thr
260 265 270

Thr Arg Val Gly Glu Gly Pro Phe Pro Thr Glu Gln Leu Asn Lys Val
275 280 285

Gly Glu Thr Leu Gln Asp Val Gly Ala Glu Tyr Gly Val Thr Thr Gly
290 295 300

Arg Lys Arg Arg Cys Gly Trp Leu Asp Leu Val Val Leu Lys Tyr Ser
305 310 315 320

Asn Ser Ile Asn Gly Tyr Thr Ser Leu Asn Ile Thr Lys Leu Asp Val
325 330 335

Leu Asp Lys Phe Lys Glu Ile Glu Val Gly Val Ala Tyr Lys Leu Asn
340 345 350

Gly Lys Glu Leu Pro Ser Phe Pro Glu Asp Leu Ile Asp Leu Ala Lys
 355 360 365

Val Glu Val Val Tyr Lys Lys Phe Pro Gly Trp Glu Gln Asp Ile Thr
 370 375 380

Gly Ile Lys Lys Tyr Glu Asp Leu Pro Glu Asn Ala Lys Asn Tyr Leu
 385 390 395 400

Lys Phe Ile Glu Asp Tyr Leu Gln Val Pro Ile Gln Trp Val Gly Thr
 405 410 415

Gly Pro Ala Arg Asp Ser Met Leu Glu Lys Lys Ile
 420 425

<210> 72

<211> 1947

<212> DNA

<213> Candida albicans

<400> 72

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<211> 584

<212> PRT

<213> Candida albicans

<400> 73

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1

5

10

15

Ile Pro Gly Thr Thr Asn Ile Leu Thr Gly Lys Thr Thr Ile Asp Glu

20

25

30

Ser Ser Ser Ile Thr Thr Gln Lys Ser Leu Lys Arg Asp Pro Lys Thr

35

40

45

Gly Leu Val Leu Met Pro Gln Pro Thr Ser Ser Pro Asn Asp Pro Leu

50

55

60

Asn Trp Ser Pro Phe Arg Lys Phe Ala Gln Leu Thr Leu Leu Ser Phe

65

70

75

80

Ile Thr Ala Leu Thr Ala Ala Thr Ser Asn Asp Ala Gly Ala Thr Gln

85

90

95

Asp Ser Leu Asn Lys Ile Tyr Gly Ile Ser Tyr Asp Ser Met Asn Thr

100

105

110

Gly Ala Gly Val Leu Phe Ile Phe Ile Gly Trp Ser Cys Met Phe Phe

115

120

125

Ala Pro Ala Ser Ser Leu Tyr Gly Arg Arg Ile Thr Tyr Ile Ile Cys

130

135

140

Leu Leu Ala Gly Thr Leu Gly Cys Val Trp Phe Ala Leu Ser Lys Arg

145

150

155

160

Thr Ala Asp Thr Ile Trp Ser Gln Ala Phe Val Gly Met Ser Glu Ala

165

170

175

Cys Ala Glu Ala Gln Val Gln Gln Ser Leu Thr Asp Leu Phe Leu Ala

180

185

190

His Glu Leu Gly Thr Ala Leu Thr Ile Tyr Ile Ser Ala Thr Ser Ile

195

200

205

Gly Thr Leu Leu Gly Pro Leu Ile Ala Gln Asp Ile Ala Gln Ala Gln

210

215

220

Thr Phe Arg Trp Val Gly Trp Trp Gly Ala Ile Ile Cys Gly Ala Thr

225

230

235

240

Leu Ile Val Ile Ile Phe Gly Cys Glu Glu Thr Val Phe Asp Arg Gln

245

250

255

Leu Tyr Thr Lys Val Leu Glu Ser Glu Asn Val Thr Gln Ile Pro Asp

260

265

270

Pro Ser Glu Glu Lys Lys Gln Asp Asn Pro Leu Thr Asn Asn Ile Ile

275

280

285

Pro His Glu Lys Lys Asn Ser Met Glu Gln Glu Leu Ser His Glu Tyr

290

295

300

Ile Thr Ala Asn Asn Asn Glu His Asp Val Val Pro Ile Asp Pro Glu

305

310

315

320

Thr Leu Asn Glu Lys Lys Lys Ser Tyr Trp Gln Arg Ile Ala Ile Ile

325

330

335

Thr Pro Ala Pro Tyr Leu Gln Gly Leu Gly Phe Lys Gln Tyr Leu Glu

340

345

350

Arg Phe Ile Ile Tyr Phe Lys Ile Phe Thr Leu Pro Ala Val Trp Phe

355

360

365

Ser Gly Leu Leu Trp Gly Leu Gln Asp Thr Tyr Met Thr Phe Phe Leu

370

375

380

Thr Thr Gln Asp Thr Tyr Phe Tyr Asn Pro Pro Trp Asn Lys Ser Asn

385

390

395

400

Ala Gly Val Ala Ile Met Asn Val Ala Thr Leu Ile Gly Ala Val Ile

405

410

415

Gly Cys Ile Val Ser Gly Leu Phe Ser Asp Tyr His Val Ile Trp Leu

420

425

430

Ala Lys Arg Asn Asn Gly Ile Met Glu Ala Glu Tyr Arg Leu Tyr Leu

435

440

445

Leu Val Ile Thr Leu Ile Ile Ser Pro Val Gly Leu Ile Met Phe Gly

450

455

460

Val Gly Ala Ala Arg Glu Trp Pro Trp Gln Val Ile Tyr Val Gly Leu

465

470

475

480

Gly Phe Ile Gly Phe Gly Trp Gly Ser Ile Gly Asp Thr Ser Met Ser

485

490

495

Tyr Leu Met Asp Ala Tyr Pro Asp Ile Val Ile Gln Gly Met Val Gly

500

505

510

Val Ser Ile Ile Asn Asn Thr Leu Ala Cys Ile Phe Thr Phe Ala Cys

515

520

525

Ser Tyr Trp Leu Asp Gly Ser Gly Thr Gln Asn Thr Tyr Ile Ala Leu

530

535

540

Ser Ile Ile Asp Phe Ala Thr Ile Ala Leu Val Phe Pro Phe Leu Tyr

545

550

555

560

Tyr Gly Lys Thr Phe Arg Arg Lys Thr Lys Arg Leu Tyr Val Ser Met

565

570

575

Val Glu Leu Thr Gln Gly Met Gly

580

<210> 74

<211> 1018

<212> DNA

<213> *Candida albicans*

<400> 74

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<210> 75

<211> 331

<212> PRT

<213> Candida albicans

<400> 75

Met Ser Gly Pro Val Asn Ser Val Ser Lys Gln Met Asn Val Asp Thr

1 5 10 15

Asp Ile Ile Thr Leu Thr Arg Phe Ile Leu Gln Glu Gln Gln Thr Val

20 25 30

Ala Pro Thr Ala Thr Gly Glu Leu Ser Leu Leu Leu Asn Ala Leu Gln

35 40 45

Phe Ala Phe Lys Phe Ile Ala His Asn Ile Arg Arg Ala Glu Leu Val

50 55 60

Asn Leu Ile Gly Val Ser Gly Ser Ala Asn Ser Thr Gly Asp Val Gln

65 70 75 80

Lys Lys Leu Asp Val Ile Gly Asp Glu Ile Phe Ile Asn Ala Met Arg

85 90 95

Ser Ser Asn Asn Val Lys Val Leu Val Ser Glu Glu Gln Glu Asp Leu

100 105 110

Ile Val Phe Pro Gly Gly Gly Thr Tyr Ala Val Cys Thr Asp Pro Ile

115 120 125

Asp Gly Ser Ser Asn Ile Asp Ala Gly Val Ser Val Gly Thr Ile Phe
130 135 140

Gly Val Tyr Lys Leu Gln Glu Gly Ser Thr Gly Gly Ile Ser Asp Val
145 150 155 160

Leu Arg Pro Gly Lys Glu Met Val Ala Ala Gly Tyr Thr Met Tyr Gly
165 170 175

Ala Ser Ala His Leu Ala Leu Thr Thr Gly His Gly Val Asn Leu Phe
180 185 190

Thr Leu Asp Thr Gln Leu Gly Glu Phe Ile Leu Thr His Pro Asn Leu
195 200 205

Lys Leu Pro Asp Thr Lys Asn Ile Tyr Ser Leu Asn Glu Gly Tyr Ser
210 215 220

Asn Lys Phe Pro Glu Tyr Val Gln Asp Tyr Ser Lys Asp Ile Lys Lys
225 230 235 240

Glu Gly Tyr Ser Leu Arg Tyr Ile Gly Ser Met Val Ala Asp Val His
245 250 255

Arg Thr Leu Leu Tyr Gly Gly Ile Phe Ala Tyr Pro Thr Leu Lys Leu
260 265 270

Arg Val Leu Tyr Glu Cys Phe Pro Met Ala Leu Leu Met Glu Gln Ala
275 280 285

Gly Gly Ser Ala Val Thr Ile Lys Gly Glu Arg Ile Leu Asp Ile Leu
 290 295 300

Pro Lys Gly Ile His Asp Lys Ser Ser Ile Val Leu Gly Ser Lys Gly
 305 310 315 320

Glu Val Glu Lys Tyr Leu Lys His Val Pro Lys
 325 330

<210> 76

<211> 1686

<212> DNA

<213> Candida albicans

<400> 76

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 aattcgatgc gatgcaatga agtttaataa aatttttttt tttctttatt tcttttaatc 180
 aacccatcaa tcattaaatt gaatcaatac ctaccattaa catacttcta tatacatata 240
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 tcatcatcat catcatcatc acaaaagaag aaatcatcaa agaaacaaag acataacgat 420
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 attttacaat tggcaaaaga acaacaagat gaacttgaac aagaagatga aatacaaaat 540
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 gaagatgagt attcagattt tgaagaagaa gaagaagttg aagagatagt atatgatgaa 660

gaagatgcag aagttgatcc caaagatgca gaattattta ataaatattt ccaatccaac 720
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<210> 77

<211> 475

<212> PRT

<213> Candida albicans

<400> 77

Met Gly Lys Ile Thr Thr Ser Asp Thr Lys Thr Lys Gln Arg His Asn

1

5

10

15

Pro Leu Leu Lys Asp Ile Ser Ser Gln Gly Gly Asn Leu Arg Thr Val

20

25

30

Pro Arg Ser Ser Ser Ser Ser Ser Ser Ser Gln Lys Lys Lys Ser Ser Lys

35

40

45

Lys Gln Arg His Asn Asp Glu Asp Asp Glu Glu Asn Gly Gly Gly Glu

50

55

60

Gly Phe Leu Asp Ala Ser Ser Ser Arg Lys Ile Leu Gln Leu Ala Lys

65

70

75

80

Glu Gln Gln Asp Glu Leu Glu Gln Glu Asp Glu Ile Gln Asn Lys Pro

85

90

95

Ser Phe Ala Gln Ser Phe Lys Asn Gln Gln Ile Asp Ser Glu Glu Glu

100

105

110

Glu Glu Glu Asp Glu Tyr Ser Asp Phe Glu Glu Glu Glu Glu Val Glu

115

120

125

Glu Ile Val Tyr Asp Glu Glu Asp Ala Glu Val Asp Pro Lys Asp Ala

130

135

140

Glu Leu Phe Asn Lys Tyr Phe Gln Ser Asn Gly Glu Ala Asn Asn Asn

145

150

155

160

Asp Asp Asp Asn Ser Phe Gln Pro Thr Ile Asn Leu Ala Asp Lys Ile

165

170

175

Leu Ala Lys Ile Gln Glu Lys Glu Ser Gln Gln Gln Gln Gln Gln

180

185

190

Ser Ser Pro Asp Asn Ser Asn Glu Asp Ala Val Leu Leu Pro Pro Lys

195

200

205

Val Ile Leu Ala Tyr Glu Lys Ile Gly Gln Ile Leu Ser Thr Tyr Thr

210

215

220

His Gly Lys Leu Pro Lys Leu Phe Lys Ile Leu Pro Ser Leu Lys Asn

225

230

235

240

Trp Gln Asp Val Leu Tyr Val Thr Asn Pro Asn Ser Trp Thr Pro His

245

250

255

Ala Thr Tyr Glu Ala Thr Lys Leu Phe Val Ser Asn Leu Ser Ser Asn

260

265

270

Glu Ala Thr Val Phe Ile Glu Thr Ile Leu Leu Pro Arg Phe Arg Asp

275

280

285

Ser Ile Glu Asn Ser Asp Asp His Ser Leu Asn Tyr His Ile Tyr Arg

290

295

300

Ala Leu Lys Lys Ser Leu Tyr Lys Pro Gly Ala Phe Phe Lys Gly Phe

305

310

315

320

Leu Leu Pro Leu Val Asp Gly Tyr Cys Ser Val Arg Glu Ala Thr Ile

325

330

335

Ala Ala Ser Val Leu Thr Lys Val Ser Val Pro Val Leu His Ser Ser

340

345

350

Val Ala Leu Thr Gln Leu Leu Thr Arg Asp Phe Asn Pro Ala Thr Thr

355

360

365

Val Phe Ile Arg Val Leu Ile Glu Lys Lys Tyr Ala Leu Pro Tyr Gln

370

375

380

Thr Leu Asp Glu Leu Val Phe Tyr Phe Met Arg Phe Arg Asn Ala Thr

385

390

395

400

Ile Asn Gln Asp Glu Asn Met Glu Asn Met Asp Ile Asp Gln Glu Lys

405

410

415

Thr Thr Lys Val Asn Asn Gly Pro Gln Leu Pro Val Val Trp His Lys

420

425

430

Ala Phe Leu Ser Phe Ala Thr Arg Tyr Lys Asn Asp Leu Thr Asp Asp

435

440

445

Gln Lys Asp Phe Leu Leu Glu Thr Val Arg Gln Arg Phe His Pro Leu

450

455

460

Ile Gly Pro Glu Ile Arg Arg Glu Leu Leu Ser

465

470

475

<210> 78

<211> 1519

<212> DNA

<213> *Candida albicans*

<400> 78

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 acaagcccag ggtgacttga ctttccttgc aggagctggt attgaaatta tacaagaac 1440
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<210> 79

<211> 440

<212> PRT

<213> Candida albicans

<400> 79

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Met Arg Gln Lys Phe Asn Met Gly Glu Ile Thr Gln Asp Ala Val Tyr
 20 25 30

Leu Asp Ala Glu Arg Arg Phe Lys Glu Ile Glu Thr Glu Thr Lys Lys
 35 40 45

Leu Ser Glu Glu Ser Lys Lys Tyr Phe Asn Ala Val Asn Gly Met Leu
 50 55 60

Asp Glu Gln Ile Asp Phe Ala Lys Ala Val Ala Glu Ile Tyr Lys Pro
 65 70 75 80

Ile Ser Gly Arg Leu Ser Asp Pro Ser Ala Thr Val Pro Glu Asp Asn

85

90

95

Pro Gln Gly Ile Glu Ala Ser Glu Ser Tyr Gln Ala Val Val Lys Asp

100

105

110

Leu Lys Asp Thr Leu Lys Pro Asp Leu Glu Leu Ile Glu Lys Arg Ile

115

120

125

Val Glu Pro Ala Gln Glu Leu Leu Lys Ile Ile Gln Ala Ile Arg Lys

130

135

140

Met Ser Val Lys Arg Asp His Lys Gln Leu Asp Leu Asp Arg His Lys

145

150

155

160

Arg Asn Phe Ser Lys Tyr Glu Ser Lys Lys Glu Arg Thr Val Lys Asp

165

170

175

Glu Glu Lys Met Phe Ser Ala Gln Ala Glu Val Glu Ile Ala Gln Gln

180

185

190

Glu Tyr Asp Tyr Tyr Asn Asp Leu Leu Lys Asn Glu Leu Pro Val Leu

195

200

205

Phe Gln Met Gln Ser Asp Phe Ile Lys Pro Leu Phe Val Ser Phe Tyr

210

215

220

Tyr Met Gln Leu Asn Ile Phe Tyr Thr Leu Tyr Thr Arg Met Glu Glu

225

230

235

240

Leu Lys Ile Pro Tyr Phe Asp Leu Ser Thr Asp Ile Val Glu Ala Tyr

245

250

255

Thr Ala Lys Lys Gly Asn Ile Glu Glu Gln Thr Asp Ala Ile Gly Ile

260

265

270

Thr His Phe Lys Val Gly His Ala Lys Ser Lys Leu Glu Ala Thr Lys

275

280

285

Arg Arg His Ala Ala Met Asn Ser Pro Pro Pro Thr Gly Ala Ser Ser

290

295

300

Ile Ala Ser Thr Gly Thr Gly Gly Glu Leu Pro Ala Tyr Ser Pro Gly

305

310

315

320

Gly Tyr Asn Gln Pro Tyr Gly Asp Ser Lys Tyr Gln Pro Pro Ser Ser

325

330

335

Pro Ala Thr Tyr Gln Ser Pro Val Val Ala Ala Thr Ala Gln Ser Pro

340

345

350

Ala Thr Tyr Gln Ser Pro Val Ala Thr Gly Gln Pro Pro Ser Tyr Leu

355

360

365

Pro Gln Thr Pro Ala Ser Ala Pro Pro Pro Gln Val Gly Ser Gly Leu

370

375

380

Pro Thr Cys Thr Ala Leu Tyr Asp Tyr Thr Ala Gln Ala Gln Gly Asp

385

390

395

400

Leu Thr Phe Pro Ala Gly Ala Val Ile Glu Ile Ile Gln Arg Thr Glu

405

410

415

Asp Ala Asn Gly Trp Trp Thr Gly Lys Tyr Asn Gly Gln Thr Gly Val

420

425

430

Phe Pro Gly Asn Tyr Val Gln Leu

435

440

<210> 80

<211> 861

<212> DNA

<213> *Candida albicans*

<400> 80

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 aattacatag atgttggagc taaactatct atcaacaatc ttaatccatt ggtcgatgaa 420
 tccttttttaa tggatacggt tagtaagttt ggaaccctta taagaaaccc aataattaga 480
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 agttatgcat tcaaggatct gagtgttgat gggaagaaat cccggcatgg agatcaagtg 660

gagcggaaat tggctgaaag tgccaaaaag aataatttgt tggtaacgaa aacttctaag 720
gcaggtacga cgaagggaaa taaaaggaag aataaaccac ataaagtac caaacctga 780
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ttgatatt aagcttctct g 861

<210> 81

<211> 1641

<212> DNA

<213> *Candida albicans*

<400> 81

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<210> 82

<211> 546

<212> PRT

<213> *Candida albicans*

<400> 82

Met Ser Gln Asp Asn Val Ser Ser Thr Ser Thr Ala Glu Ala Val Asn

1

5

10

15

Asn Glu Ile Lys Val Lys Asp Glu Phe Pro Gln Glu Glu Gln Ala His

20

25

30

Thr Ser Leu Glu Asp Lys Pro Val Ser Ala Tyr Ile Gly Ile Ile Ile

35

40

45

Met Cys Phe Leu Ile Ala Phe Gly Gly Phe Val Phe Gly Phe Asp Thr

50

55

60

Gly Thr Ile Ser Gly Phe Ile Asn Met Ser Asp Phe Leu Glu Arg Phe
 65 70 75 80

Gly Gly Thr Lys Ala Asp Gly Thr Leu Tyr Phe Ser Asn Val Arg Thr
 85 90 95

Gly Val Met Ile Gly Leu Phe Asn Ala Gly Gly Ala Ile Gly Ala Leu
 100 105 110

Phe Leu Ser Lys Val Gly Asp Met Tyr Gly Arg Arg Val Gly Ile Met
 115 120 125

Thr Ala Met Ile Val Tyr Ile Val Gly Ile Ile Val Gln Ile Ala Ser
 130 135 140

Gln His Ala Trp Tyr Gln Val Met Ile Gly Arg Ile Ile Thr Gly Leu
 145 150 155 160

Ala Val Gly Met Leu Ser Val Leu Cys Pro Leu Phe Ile Ser Glu Val
 165 170 175

Ser Pro Lys His Leu Arg Gly Thr Leu Val Cys Cys Phe Gln Leu Met
 180 185 190

Ile Thr Leu Gly Ile Phe Leu Gly Tyr Cys Thr Thr Tyr Gly Thr Lys
 195 200 205

Ser Tyr Ser Asp Ser Arg Gln Trp Arg Ile Pro Leu Gly Leu Cys Phe
210 215 220

Ala Trp Ala Leu Cys Leu Val Ala Gly Met Val Arg Met Pro Glu Ser
225 230 235 240

Pro Arg Tyr Leu Val Gly Lys Asp Arg Ile Glu Asp Ala Lys Met Ser
245 250 255

Leu Ala Lys Thr Asn Lys Val Ser Pro Glu Asp Pro Ala Leu Tyr Arg
260 265 270

Glu Leu Gln Leu Ile Gln Ala Gly Val Glu Arg Glu Arg Leu Ala Gly
275 280 285

Lys Ala Ser Trp Gly Thr Leu Phe Asn Gly Lys Pro Arg Ile Phe Glu
290 295 300

Arg Val Ile Val Gly Val Met Leu Gln Ala Leu Gln Gln Leu Thr Gly
305 310 315 320

Asp Asn Tyr Phe Phe Tyr Tyr Ser Thr Thr Ile Phe Lys Ser Val Gly
325 330 335

Met Asn Asp Ser Phe Glu Thr Ser Ile Ile Ile Gly Val Ile Asn Phe
340 345 350

Ala Ser Thr Phe Val Gly Ile Tyr Ala Ile Glu Arg Met Gly Arg Arg
355 360 365

Leu Cys Leu Leu Thr Gly Ser Val Ala Met Ser Ile Cys Phe Leu Ile
370 375 380

Tyr Ser Leu Val Gly Thr Gln His Leu Tyr Ile Asp Lys Pro Gly Gly
385 390 395 400

Ala Ser Arg Lys Pro Asp Gly Asp Ala Met Ile Phe Met Thr Pro Leu
405 410 415

Tyr Val Ile Phe Ser Pro Ser Thr Trp Ala Gly Gly Val Tyr Ser Ile
420 425 430

Ile Ser Glu Leu Tyr Pro Leu Lys Val Arg Ser Lys Ala Met Gly Leu
435 440 445

Ala Asn Ala Ser Asn Trp Thr Trp Gly Phe Leu Ile Ser Phe Phe Thr
450 455 460

Ser Phe Ile Thr Asp Ala Ile His Phe Tyr Tyr Gly Phe Val Phe Met
465 470 475 480

Gly Cys Leu Val Phe Ser Ile Phe Phe Val Tyr Phe Met Val Tyr Glu
485 490 495

Thr Lys Gly Leu Thr Leu Glu Glu Ile Asp Glu Leu Tyr Ser Thr Lys
500 505 510

Val Leu Pro Trp Lys Ser Ala Gly Trp Val Pro Pro Ser Glu Glu Glu

515

520

525

Met Ala Thr Ser Thr Gly Tyr Ala Gly Asp Ala Lys Pro Glu Glu Glu

530

535

540

His Val

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<210> 83

<211> 1014

<212> DNA

<213> Candida albicans

<400> 83

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<210> 84

<211> 337

<212> PRT

<213> *Candida albicans*

<400> 84

Asn Ala Pro Val Ser Gly Thr Ile Thr Glu Phe Leu Val Asp Val Asp

1 5 10 15

Ala Thr Val Glu Val Gly Gln Glu Ile Ile Lys Met Glu Glu Gly Asp

20 25 30

Ala Pro Ala Gly Gly Ala Ser Ala Ser Glu Ala Pro Ala Lys Lys Glu

35 40 45

Glu Ala Pro Glu Lys Ala Lys Glu Glu Ser Ala Gln Ala Ala Ala Pro

50 55 60

Lys Lys Glu Glu Thr Lys Lys Glu Glu Pro Lys Lys Glu Ser Lys Pro

65 70 75 80

Ala Pro Lys Lys Glu Glu Ser Lys Lys Ser Thr Gln Ser Thr Thr Ser

85 90 95

Ala Pro Thr Phe Thr Asn Phe Ser Arg Asn Glu Glu Arg Val Lys Met

100

105

110

Asn Arg Met Arg Leu Arg Ile Ala Glu Arg Leu Lys Glu Ser Gln Asn

115

120

125

Thr Ala Ala Ser Leu Thr Thr Phe Asn Glu Val Asp Met Ser Asn Leu

130

135

140

Met Asp Phe Arg Lys Lys Tyr Lys Asp Glu Phe Ile Glu Lys Thr Gly

145

150

155

160

Ile Lys Leu Gly Phe Met Gly Ala Phe Ser Lys Ala Ser Ala Leu Ala

165

170

175

Leu Lys Glu Ile Pro Ala Val Asn Ala Ala Ile Glu Asn Asn Asp Thr

180

185

190

Leu Val Phe Lys Asp Tyr Ala Asp Ile Ser Ile Ala Val Ala Thr Pro

195

200

205

Lys Gly Leu Val Thr Pro Val Val Arg Asn Ala Glu Ser Leu Ser Ile

210

215

220

Leu Gly Ile Glu Lys Glu Ile Ser Asn Leu Gly Lys Lys Ala Arg Asp

225

230

235

240

Gly Lys Leu Thr Leu Glu Asp Met Thr Gly Gly Thr Phe Thr Ile Ser

245

250

255

Asn Gly Gly Val Phe Gly Ser Leu Tyr Gly Thr Pro Ile Ile Asn Met

260

265

270

Pro Gln Thr Ala Val Leu Gly Leu His Gly Val Lys Glu Arg Pro Val

275

280

285

Thr Val Asn Gly Gln Ile Val Ser Arg Pro Met Met Tyr Leu Ala Leu

290

295

300

Thr Tyr Asp His Arg Val Val Asp Gly Arg Glu Ala Val Ile Phe Leu

305

310

315

320

Arg Thr Ile Lys Glu Leu Ile Glu Asp Pro Arg Lys Met Leu Leu Leu

325

330

335

Glu

<210> 85

<211> 1806

<212> DNA

<213> Candida albicans

<400> 85

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1806

<210> 86

<211> 574

<212> PRT

<213> Candida albicans

<400> 86

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1

5

10

15

Arg Ser Leu Val Asn Asn Ser Thr Ser Leu Val Leu Lys Asn Gln Phe

20

25

30

Lys Lys Tyr Ser Thr Ser Thr Pro Pro Lys Val Ala Lys Ser Lys Ser

35

40

45

Ser Thr Ile Gly Lys Ile Phe Arg Tyr Thr Phe Tyr Thr Ala Val Ile

50

55

60

Ser Val Ile Gly Ser Ala Gly Leu Ile Gly Tyr Lys Ile Tyr Glu Glu

65

70

75

80

Ser Gln Pro Val Asp Gln Val Lys Gln Thr Pro Leu Phe Pro Asn Gly

85

90

95

Glu Lys Lys Lys Thr Leu Val Ile Leu Gly Ser Gly Trp Gly Ala Ile

100

105

110

Ser Leu Leu Lys Asn Leu Asp Thr Thr Leu Tyr Asn Val Val Ile Val

115

120

125

Ser Pro Arg Asn Tyr Phe Leu Phe Thr Pro Leu Leu Pro Ser Val Pro

130

135

140

Thr Gly Thr Val Glu Leu Arg Ser Ile Ile Glu Pro Val Arg Ser Val

145

150

155

160

Thr Arg Arg Cys Pro Gly Gln Val Ile Tyr Leu Glu Ala Glu Ala Thr

165

170

175

Asn Ile Asn Pro Lys Thr Asn Glu Leu Thr Leu Lys Gln Ser Thr Thr

180

185

190

Val Val Ser Gly His Ser Gly Lys Asp Thr Ser Ser Ser Lys Ser Thr

195

200

205

Val Ala Glu Tyr Thr Gly Val Glu Glu Ile Thr Thr Thr Leu Asn Tyr

210

215

220

Asp Tyr Leu Val Val Gly Val Gly Ala Gln Pro Ser Thr Phe Gly Ile

225

230

235

240

Pro Gly Val Ala Glu Asn Ser Thr Phe Leu Lys Glu Val Ser Asp Ala

245

250

255

Ser Ala Ile Arg Arg Lys Leu Met Asp Val Ile Glu Ala Ala Asn Ile

260

265

270

Leu Pro Lys Asp Asp Pro Glu Arg Lys Arg Leu Leu Ser Ile Val Val

275

280

285

Cys Gly Gly Gly Pro Thr Gly Val Glu Ala Ala Gly Glu Ile Gln Asp

290

295

300

Tyr Ile Asp Gln Asp Leu Lys Lys Trp Val Pro Glu Val Ala Asp Glu

305

310

315

320

Leu Lys Val Ser Leu Val Glu Ala Leu Pro Asn Val Leu Asn Thr Phe

325

330

335

Asn Lys Lys Leu Ile Asp Tyr Thr Lys Glu Val Phe Lys Asp Thr Asn

340

345

350

Ile Asn Leu Met Thr Asn Thr Met Ile Lys Lys Val Asn Asp Lys Ser

355

360

365

Leu Ile Ala Asn His Lys Asn Pro Asp Gly Ser Thr Glu Ser Ile Glu

370

375

380

Ile Pro Tyr Gly Leu Leu Ile Trp Ala Thr Gly Asn Ala Pro Arg Asp

385

390

395

400

Phe Thr Arg Asp Leu Ile Ala Lys Val Asp Glu Gln Lys Asn Ala Arg

405

410

415

Arg Gly Leu Leu Val Asp Glu Arg Leu Lys Val Asp Gly Thr Asp Asn

420

425

430

Ile Phe Ala Leu Gly Asp Cys Thr Phe Thr Lys Tyr Pro Pro Thr Ala

435

440

445

Gln Val Ala Phe Gln Glu Gly Glu Tyr Leu Ala Asn Tyr Phe Asp Lys

450

455

460

Leu His Ala Val Glu Ser Leu Lys Tyr Thr Ile Ala Asn Pro Thr Pro

465

470

475

480

Lys Asp Asn Val Glu Lys Leu Ser Arg Lys Leu Ala Arg Leu Glu Lys

485

490

495

Asn Leu Pro His Phe Ile Tyr Asn Tyr Gln Gly Ser Leu Ala Tyr Ile

500

505

510

Gly Ser Glu Lys Ala Val Ala Asp Leu Val Trp Gly Asp Trp Ser Asn

515

520

525

Ile Ser Ser Gly Gly Asn Leu Thr Phe Leu Phe Trp Arg Ser Ala Tyr

530

535

540

Ile Tyr Met Cys Leu Ser Val Lys Asn Gln Val Leu Val Val Leu Asp

545

550

555

560

Trp Ala Lys Val Tyr Phe Phe Gly Arg Asp Cys Ser Lys Glu

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570

<210> 87

<211> 1137

<212> DNA

<213> *Candida albicans*

<400> 87

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<210> 88

<211> 378

<212> PRT

<213> Candida albicans

<400> 88

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Leu Pro Ala Leu Ala Glu Leu Asp Ile Leu Lys Arg Cys Tyr Ile Cys

20 25 30

Lys Asp Leu Leu Asn Ala Pro Val Arg Thr Gln Cys Asp His Thr Tyr

35 40 45

Cys Ser Gln Cys Ile Arg Glu Phe Leu Leu Arg Asp Asn Arg Cys Pro

50 55 60

Leu Cys Lys Thr Glu Val Phe Glu Ser Gly Leu Lys Arg Asp Pro Leu

65 70 75 80

Leu Glu Glu Ile Val Val Ser Tyr Ala Ser Leu Arg Pro His Leu Leu

85 90 95

Arg Leu Leu Glu Ile Glu Lys Val Glu Ser Lys Gln Glu Val Asp Arg

100 105 110

Glu Lys Ser Ala Asn Glu Ser Ala Ser Asn Gly Asn Arg Asn Val Asn

115

120

125

Asn Asp Val Asp Glu Thr Ala Arg Val Lys Asp Gln Ser Asn Ala Asp

130

135

140

Glu Leu Gly Glu Glu Lys Gly Gln Ala Gln His Gly Glu Gln Val Asn

145

150

155

160

Glu Gln Thr Thr Glu Val Ile Ser Leu Leu Ser Asp Asp Glu Glu Asn

165

170

175

Gly Ser Asp Ser Leu Val Lys Cys Pro Ile Cys Phe Glu Arg Met Glu

180

185

190

Leu Asp Val Leu Gln Gly Lys His Ile Asp Asp Cys Leu Ser Gly Lys

195

200

205

Ser Thr Lys Arg Thr Pro Thr Asp Ile Leu Ser Pro Lys Ala Lys Arg

210

215

220

Pro Lys Gln Ile Thr Ser Phe Phe Lys Pro Thr Ile Asp Thr Lys Thr

225

230

235

240

Pro Ser Pro Pro Thr Ser Lys Ala Ser Thr Thr Pro Thr Ala Thr Pro

245

250

255

Thr Thr Thr Leu Leu Lys Ala Asn Val Ala Ser Pro Ser Pro Val Ala

260

265

270

Gln Ser Thr Val His Lys Gly Lys Pro Leu Pro Lys Leu Asp Phe Ser

275

280

285

Ser Leu Ser Thr Gln Lys Ile Lys Ala Lys Leu Ser Asp Leu Lys Leu

290

295

300

Pro Thr Thr Gly Ser Arg Asn Glu Met Glu Ala Arg Tyr Leu His Tyr

305

310

315

320

Tyr Val Ile Tyr Asn Ala Asn Leu Asp Ser Asn His Pro Val Lys Glu

325

330

335

Ser Ile Leu Arg Gln Gln Leu Lys Gln Trp Glu Met Val Gln His Gln

340

345

350

Pro Ser Phe Gly Asp Ala Glu Trp Lys Gly Ala Glu Thr Gly Asn Trp

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360

365

Lys Glu Leu Ile Ala Arg Ala Arg Ser Asn

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375

<210> 89

<211> 764

<212> DNA

<213> Candida albicans

<400> 89

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<210> 90

<211> 179

<212> PRT

<213> *Candida albicans*

<400> 90

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Glu Ser Leu Asn Ile Leu Ile Glu Ser Glu Phe Ser Ser Met Ser Ser

20

25

30

Asp Thr Thr Ala Phe Gln Ala Pro Pro Thr Lys Ala Pro Glu Ala Ser

35

40

45

Met Asp Ser Gly Thr Ile Pro Lys Arg Ser Pro Ala Arg Leu Phe Gln

50

55

60

Arg Trp Ile Ser Ser Ser Ser Ser Lys Asp Lys Pro Val Tyr Ala Glu

65

70

75

80

Lys Ala Leu Leu Lys Lys Gln Asn Ile Ala Pro Glu Pro Ile Lys Ile

85

90

95

Thr Lys Gln Gln Val Pro Ala Lys Gln Ile Gly Thr Ser Glu Pro Ser

100

105

110

Ser Pro Leu Ser Val Ala Ser Ser His Asp Asn Ser Cys Ser Asp Ser

115

120

125

Ser Ala Ala Ser Ile Phe Ser Asp Ser Lys Asn Asn Asn Ser Met Gln

130

135

140

Met Leu Leu Thr Asp Asp Ile Glu Asp Ile Leu Glu Asp Ile Asp Asp

145

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155

160

Ala Glu Ile Tyr Asp Ala Glu Lys Val Thr Ile Thr Tyr Ile Ser Ser

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170

175

Lys Ser Cys

<210> 91

<211> 2154

<212> DNA

<213> *Candida albicans*

<400> 91

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<210> 92

<211> 717

<212> PRT

<213> *Candida albicans*

<400> 92

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15

Ala Pro Ala Phe Gly Ile Glu Leu Glu Phe Ser Gln Gln Gly Ser Ser

20

25

30

Asp Gly Ala Ile Glu Lys Ala Ala Leu Ala Val Pro Val Phe Ser Val

35

40

45

Asp Asn Gln Asp Phe Val Leu Ile Arg Asp Leu Ala Lys Tyr Trp Gly
50 55 60

Tyr Pro Ser Ser Tyr Gln Leu Ile Val Lys Leu Val Lys Cys Ala Asn
65 70 75 80

Ile Glu Lys Ser Gln Ile Leu Lys Thr Asp Lys Asp Leu Asn Lys Glu
85 90 95

Leu Phe Glu Leu Asp Leu Ile Glu Glu Ala Asp Thr Lys Ile Asp Leu
100 105 110

Phe Tyr Ile Ser Leu Pro Leu Val Tyr Ser Arg Ile Glu Asn Lys Lys
115 120 125

Val Phe Tyr Val Ser Arg Glu Pro Glu Gln Pro Lys Val Ser Lys Ala
130 135 140

Pro Thr Gln Glu Lys Pro Ala Ser Val Val Ala Ala Glu Glu Asp Asp
145 150 155 160

Asp Asn Leu Asp Asp Asp Glu Glu Asp Glu Val Asp Glu Asp Met Asp
165 170 175

Glu Asp Asn Asp Asn Ser Gly Glu Leu Ser Lys Gly Tyr Lys His Met
180 185 190

His Lys Asp His Pro Lys Tyr Ile Asn Asp Asp Arg Val Thr Ile Gly
195 200 205

Gln Val Phe His Gln Tyr Gly Leu Asp Pro Ser Thr Pro Leu Thr His
210 215 220

Ser Leu Phe Asn Ser Ile Asn Ser Met Ser Lys Leu Asn Tyr Tyr Lys
225 230 235 240

Asn Phe Gly Val Ser Gly Tyr Arg Phe Leu Pro Asn Ser Lys Leu Ser
245 250 255

Tyr Ala Glu Arg Glu Leu Val Leu Asn Ala Asn Asn Tyr Asn Asp Met
260 265 270

His Ile Asn Glu Lys Thr Glu Ser Lys Pro Lys Lys Ser Phe Arg Lys
275 280 285

Pro Ile Gly Lys Ser Lys Lys His Asn Leu Gln Ile Asp Pro Asn Ser
290 295 300

Ile Asp Leu Ser Glu Ser Val Ile Pro Gly Gln Gly Phe Ile Pro Asp
305 310 315 320

Phe Ser Ile His His Leu Cys Lys Val Pro Asn Tyr Tyr Val Thr Ser
325 330 335

Asn His Gln Ser Leu Pro Ser Ser Phe Asn Thr Lys Asn Leu Asn Ala
340 345 350

Thr Ser Asn Ser Ser Tyr Leu Phe Asn Asp Asn Val Lys Ile Lys Ser
 355 360 365

Lys Ser Ile Gln Lys Leu Val Phe Asn Ser Asp Thr Asp Asn Tyr His
 370 375 380

His Thr Lys Tyr Phe Tyr Thr Lys Thr Tyr Arg Gly Pro Gly Ser Gly
 385 390 395 400

Asn Tyr Lys Asp Gly Ala Leu Met Asn Lys Ile Asn Lys Ile His Leu
 405 410 415

Ser Ser Asn Lys Lys Pro Arg His Lys Arg Lys Val Ser Asn Asn Asn
 420 425 430

Arg Tyr Asn Lys Ser Leu Lys Gly Leu Val His Glu Lys Phe Asp Lys
 435 440 445

Asn Phe Val Glu Tyr Leu Leu Ser Glu Gln Arg Lys Tyr Thr Glu Asp
 450 455 460

Tyr Ser Asn Leu Glu Ile Leu His Asn Ser Leu Gln Phe Asn Val Leu
 465 470 475 480

Leu Asn Thr Tyr Arg Gly Val Ala Gln Glu Thr Trp Asn Asn Tyr Tyr
 485 490 495

Lys Phe Lys Leu Ile Asp Phe Glu Gln Leu Lys Ala Leu Gln Met Glu

500

505

510

Ala Asn Glu Leu Glu Glu Arg Lys Leu Asp Ala Ala Arg His Gln Gln

515

520

525

Trp Ala Glu Glu Glu Lys Leu Arg Gln Glu Arg Leu Arg Leu Val Phe

530

535

540

Glu Asp Glu Arg Asn Glu Phe Glu Gln Leu Gln Ser Glu Phe Gly Gln

545

550

555

560

Arg Lys Lys Asp Leu Tyr Glu Lys Leu Arg Arg Arg Gln Leu Glu Ala

565

570

575

Ser Leu Ser Asp Ser Phe Glu Ala Asp Ser Glu Asn Asp Asp Glu Ser

580

585

590

Glu Leu Ala Gln Ile Gln Gln Asp Phe Glu Ser Ser Ala Asn Ala Leu

595

600

605

Lys Thr Lys Phe Glu Ala Lys Arg Lys Asp Leu Ile Asn Pro Ala Pro

610

615

620

Pro Pro Gln Pro Ile Glu Thr Pro Gln Leu Asp Leu Asn Asn Lys Phe

625

630

635

640

Ser Leu Pro Thr Val Tyr Pro Glu Ile Ile Arg Asn Leu Pro Leu Glu

645

650

655

Leu Arg Gly Ile Val Gln Glu Ser Lys Glu Glu Leu Pro Pro Ile Lys
 660 665 670

Lys Pro Ile Leu Tyr Val Thr Thr Tyr Pro Glu Arg Pro Asn Pro Glu
 675 680 685

Tyr Leu Thr Arg Ile Glu Ile Ile Lys Leu Pro Asn Ala Asn Ser Val
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Gly Trp Asp Asn Phe Lys Lys Tyr Lys Asp Ser Asp Val
 705 710 715

<210> 93

<211> 411

<212> DNA

<213> Candida albicans

<400> 93

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<210> 94

<211> 136

<212> PRT

<213> Candida albicans

<400> 94

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Ile Tyr Lys Tyr Leu Phe Met Ser Ala Asp Gly Lys Lys Glu Asp Ile

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Leu Glu Thr Gly Glu Lys Ile Asp Gly Glu Leu Gln Val Lys Leu Gly

35 40 45

Asp Lys Phe Phe Pro Ile Ser Arg Phe Ala Lys Pro His Ala Val Val

50 55 60

His Pro Ala Asp His His Ser Lys Val Asp Ala Asn Lys Phe Pro Asp

65 70 75 80

Val Glu Pro Glu Gln Lys Gln Lys Glu Asp Leu Lys Glu Phe Asn Gln

85 90 95

Gln Val Leu Lys Pro Asp Ile Asn Lys Pro Lys Val Asp Pro Asn Ser

100 105 110

Phe Pro Asp Ile Glu Pro Glu Ala Lys Glu Arg Glu Ala Lys Leu Lys

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Ala Glu Arg Leu Lys Lys Ser Gln

130

135

<210> 95

<211> 1193

<212> DNA

<213> *Candida albicans*

<400> 95

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<210> 96

<211> 238

<212> PRT

<213> Candida albicans

<400> 96

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Pro Pro Arg Gln Gln Gln Arg Arg Lys Ser Asn Thr Gly Ala Ile Ser
 20 25 30

Thr Pro Val Ala Ser Ser Val Leu Leu Thr Pro Ser Thr Thr Thr Lys
 35 40 45

Lys Pro Thr Arg Thr Pro Val Ser Gln Lys Arg Lys Gln Gly Val Gln
 50 55 60

Leu Ser Pro Pro Gln Ala Asn Lys Phe Pro Phe Thr Pro Ile Thr Pro
 65 70 75 80

Gln Lys Ser Pro Cys Lys Thr Arg Lys Asn Leu Asp Leu Phe Thr Ser
 85 90 95

Asn Glu Lys Phe Gly Leu Leu Leu Pro Ser Pro Ser Thr Ile Gly Ser

100

105

110

Gly Arg Cys His Asn Ser Phe Thr Gln Ala Pro Pro Pro Leu Phe Asp

115

120

125

Leu Lys Lys Val Asn Glu Phe Lys Val Pro Lys Thr Pro Ala Lys Gln

130

135

140

Ile Ile Asp Asn Ser Arg Thr Lys Glu Ser Glu Asn Glu Asp Asp Trp

145

150

155

160

Glu Val Met Asp Ile Asp Glu Val Ala Lys Ile Pro Arg Ala Lys Leu

165

170

175

Arg Asn Pro Phe Ile Asp Thr Phe Glu Pro Thr Ser Pro Val Thr Pro

180

185

190

Glu Glu Ser Thr Gly Asp Arg Ile Asn Tyr Asp Thr His Met Glu Leu

195

200

205

Ile Asn Ser Lys Thr Gly Lys Lys Arg Val Val Lys Leu Thr Lys Asn

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<211> 888

<212> DNA

<213> *Candida albicans*

<400> 97

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<213> *Candida albicans*

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30

Val Thr Ile Thr Ser Cys Glu Glu Asn Lys Cys His Glu Thr Glu Val

35

40

45

Thr Thr Gly Val Thr Thr Val Thr Glu Val Asp Thr Thr Tyr Thr Thr

50

55

60

Tyr Cys Pro Leu Ser Thr Thr Glu Ala Pro Ala Pro Ser Thr Ala Thr

65

70

75

80

Asp Val Ser Thr Thr Val Val Thr Ile Thr Ser Cys Glu Glu Asp Lys

85

90

95

Cys His Glu Thr Ala Val Thr Thr Gly Val Thr Thr Val Thr Glu Gly

100

105

110

Thr Thr Ile Tyr Thr Thr Tyr Cys Pro Leu Pro Ser Thr Glu Ala Pro

115

120

125

Gly Pro Ala Pro Ser Thr Ala Glu Glu Ser Lys Pro Ala Glu Ser Ser

130

135

140

Pro Val Pro Thr Thr Ala Ala Glu Ser Ser Pro Ala Lys Thr Thr Ala

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Ala Glu Ser Ser Pro Ala Gln Glu Thr Thr Pro Lys Thr Val Ala Ala

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170

175

Glu Ser Ser Ser Ala Glu Thr Thr Ala Pro Ala Val Ser Thr Ala Glu

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Leu Ala Ala Leu Phe

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<210> 99

<211> 977

<212> DNA

<213> Candida albicans

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<213> Candida albicans

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25

30

Gln Ser Gln Pro Asn Tyr Ser Gln Gln Thr Gln Asp Arg Gly Met Phe

35

40

45

Ser Gly Gly Gly Gly Gly His Gly His Tyr Gln Gln Gln Gln Gly Tyr

50

55

60

Asn Ala Tyr Gly Pro Pro Pro Pro Gln Gly Gly Tyr Tyr Gln Gln Gln

65

70

75

80

Pro Gly Gly Gly Gly Gly Tyr Tyr Gln Gln Gln Gln Gln Gln Gln Pro

85

90

95

Met Tyr Val Gln Gln Gln Pro Arg Ser Gly Gly Asn Asp Ser Cys Leu

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Met Gly Cys Leu Ala Ala Leu Cys Val Cys Cys Thr Leu Asp Met Leu

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Phe

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<211> 952

<212> PRT

<213> Candida albicans

<400> 102

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30

Ser Leu Lys Thr Leu Ile Asp Leu Leu Tyr Asp Lys Gly Phe Ala Ala

35

40

45

Gln Ile Arg Pro Gly Asp Leu Asp His Leu Leu Val Phe Val Lys Leu

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55

60

Ser Ser Tyr Lys Phe Ser Glu Glu Ala Glu Lys Asp Leu Ile Lys Asn

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Tyr Glu Phe Gly Val Thr Gly Lys Asp Asp Val Leu Ala Ser Lys Leu

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Arg Ile Ile Tyr Gln Tyr Leu Thr Tyr Pro Gln Ser Val Gly Gly Cys

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105

110

Gly Ile Thr Pro Asn Ser Gly Asp Trp Lys Phe Val Thr Ser Ile Val

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125

Pro Ile Thr Asn Ala Phe Asn Glu Thr Thr Leu Val Glu Asp Leu Lys

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Ile Asn Val Thr Gln Pro Asn Leu Ser Ile Ala Thr Ile Lys Lys Thr

145

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155

160

Tyr Gly Val Glu Val Ala Leu Tyr Phe Glu Tyr Ile Lys His Tyr Thr

165

170

175

Phe Trp Leu Leu Leu Leu Ser Ile Ile Gly Leu Val Ser His Phe Arg

180

185

190

Lys Asp Lys Arg Phe Ser Leu Thr Phe Ala Phe Ile Asn Leu Leu Trp

195

200

205

Gly Val Leu Phe Leu Ala Ser Trp His Arg Arg Glu Gln His Leu Val

210

215

220

Asn Val Trp Gly Val Gln Asn Ser His Leu Ile Glu Glu His Asn Ser

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230

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Glu Leu Ala Lys Val Asn Glu Arg Tyr Glu Glu Lys Ser Thr Tyr Phe

245

250

255

His Ala Asn Asn Thr Asn Gly Phe Arg Phe Leu Lys Gln Leu Ala Phe

260

265

270

Ile Pro Ile Ala Leu Val Phe Val Gly Val Leu Ile Ser Tyr Gln Leu

275

280

285

Ser Cys Phe Cys Ile Glu Ile Phe Leu Thr Asp Ile Tyr Asp Gly Pro

290

295

300

Gly Lys Ser Leu Leu Thr Leu Leu Pro Thr Val Leu Ile Ser Val Phe

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Val Pro Ile Leu Thr Ile Val Tyr Asn Ala Val Thr Asp Ile Ile Ile

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Lys Trp Glu Asn His Asp Asn Gln Tyr Ser Lys Asn Asn Ser Ile Leu

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Val Lys Thr Phe Val Leu Asn Phe Leu Thr Gly Tyr Val Pro Leu Ile

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365

Ile Thr Ser Phe Ile Tyr Leu Pro Phe Ala His Leu Val Gln Pro His

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Leu Gly Asp Ile Lys Thr Thr Ile Ala Thr Tyr Ala Gly Glu Asn Arg

385

390

395

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405

410

415

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425

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Arg Phe Val Phe Asn Phe Ile Glu Thr Lys Ile Gln Lys Lys Pro Gln

450

455

460

Leu Gln Thr Lys Asp Asp Asn Pro Asp Glu Ser Ile Trp Leu His Asn

465

470

475

480

Val Arg Leu Ser Leu Lys Leu Pro Glu Tyr Asn Val Asp Asp Asp Phe

485

490

495

Arg Gly Leu Val Leu Gln Phe Gly Tyr Leu Ile Met Phe Gly Pro Val

500

505

510

Trp Pro Leu Ala Pro Leu Val Cys Ile Ile Phe Asn Leu Ile Phe Phe

515

520

525

Lys Leu Asp Asn Phe Lys Leu Leu Asn Gly Lys Tyr Phe Lys Pro Pro

530

535

540

Val Pro Arg Arg Val Asp Ser Ile His Pro Trp Asn Leu Ala Leu Phe

545

550

555

560

Leu Leu Ala Trp Ile Gly Ser Ile Ile Ser Pro Val Val Thr Ala Phe

565

570

575

Tyr Arg His Gly Thr Ala Pro Pro Lys Ser Met Gly Gln Phe Ala Leu

580

585

590

Asp Lys Ala Ser Val His Val Ser Ser Ser Val Phe Leu Val Leu Leu

595

600

605

Met Phe Val Ser Glu His Gly Phe Leu Ile Leu Ser Tyr Leu Leu Phe

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615

620

Glu Phe Ser Ser Leu Phe Lys Ser Gln Val Glu Trp Glu Asn Asp Phe

625

630

635

640

Val Asp Asn Asp Ile Lys Leu Arg His Asp Tyr Tyr Ser Gly Lys Val

645

650

655

Lys Pro Thr Tyr Lys Val His Ser Asp Glu Leu Trp Glu Lys Phe Thr

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665

670

Pro Gln Ser Thr Leu Asn Phe Thr Val Pro Lys Pro Thr Ala Glu Thr

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Asp Asp Lys Val Glu Lys Ile Ala Ser Thr Glu Gly Ala Tyr Ser Thr

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Ser Ala Glu Lys Ser Thr Thr Thr Ala Thr Ser Arg Ser Asp Lys Ser

705

710

715

720

Lys Ile Leu Ala Glu Lys Glu Ala Ile Leu Lys Gln Lys Glu Ala Glu

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730

735

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745

750

Pro Thr Asp Ser Val Ile Lys Thr Lys Ser Ser Ala Asn Gly Lys Ala

755

760

765

Val Leu Ser Thr Ile Asp Asn Asn Lys His Val Ser Asp Ile Asp Pro

770

775

780

Asp Ala Ala Ala Ala Ala Thr Ala Thr Ser Thr Ala Asn Asp Ser Gly

785

790

795

800

Ala Lys Lys Ser Thr Ser Thr Ser Thr Ser Ala Ala Thr Asp Thr Thr

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Asn Thr Ala Pro Ser His Ser Gly Pro Thr Pro Val Thr Ser Ser Glu

820

825

830

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835

840

845

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855

860

Gly Ser Thr Thr Thr Gly Asp Lys Asp Thr Val Ser Ser Asp Lys Ala

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Ser Ser Pro Ile Glu Asp Lys Glu Ser Ser Pro Ser Leu Ala Gly Ser

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895

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900

905

910

Leu Val Thr Asn Ala Val Asn Lys Val Glu Asn Asn Asp Asp Phe Lys

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Leu Lys Lys Leu Phe Asn Lys Lys

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<212> PRT

<213> Candida albicans

<400> 103

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25

30

Gln Gln Pro Gln Ile Leu Leu Thr Ser Pro His Leu Ile Ser Val Gln

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Leu Ser Ser Leu Leu Ser Lys Asn Gln Thr Thr Thr Thr Thr Val Ser

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Gln Val Ile Val Pro Asn Leu Leu

65

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<212> DNA

<213> Candida albicans

<400> 104

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<210> 105

<211> 1603

<212> PRT

<213> *Candida albicans*

<400> 105

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20 25 30

Lys Val Phe Asp Phe Ser Val Thr Tyr Lys Leu Ala Arg Lys His Phe

35 40 45

Glu Thr Ser Val Ala Leu Leu Lys Ala Phe Thr Leu Ser Glu Tyr Ala

50 55 60

Ser Glu Tyr Ile Glu Asp Phe Asp Lys Val Thr Glu Val Gln Val Ser

65 70 75 80

Glu Ser Glu Ile Ser Asp Leu Ser Ser Ile Asn Ser Ala Glu Ser Ile

85 90 95

Pro Leu Asn Asp Ala Ser Pro Ser Glu Leu Asp Glu Ser Asn Thr Lys

100 105 110

Lys Ile Lys Thr Val Leu Thr Val Arg Asp Ile Leu Val Ser Asn Ala

115 120 125

Gly Lys Ser Asp Glu Lys Asp Pro Asp Arg Leu Thr Leu Ser Ile Pro

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135

140

Glu Val Asp Gly Arg Val Asp Met Phe Leu Val Trp Cys Cys Phe Tyr

145

150

155

160

Ala Lys Thr Met Leu Glu Arg Phe Lys Pro Thr Val Glu Ser Ser Cys

165

170

175

Thr Lys Asn Gln Ile Lys Ile Ile Arg Gly Pro Arg Lys Lys Leu Lys

180

185

190

Leu Asp Val His Leu Asp Ser Val Ala Leu Val Ile Arg Leu Pro Arg

195

200

205

Lys Val Asp Val Met Ile Glu Ile Asp Arg Ala Arg Leu Lys Asn Ala

210

215

220

Leu Val Leu Lys Ser Ala Asp Ile Val Asn Cys Arg Leu Tyr Val Val

225

230

235

240

Asp Pro Ser Thr Lys Phe Trp Ala Arg Leu Leu Ile Ile Lys Glu Pro

245

250

255

Lys Phe Ser Ile Asp Phe Thr Lys Ser Ile His Asp Ala Tyr Phe Gly

260

265

270

Ile Ser Thr Arg Ser Ile Arg Ile Ser Val Pro Asn Arg Phe Leu Phe

275

280

285

Tyr Thr Val Ile Asp Asn Phe Ile Thr Phe Phe Lys Ala Ile Lys Gln

290

295

300

Leu Ser Gln Asn Phe Arg Tyr Phe Asn Trp Gly Ile Asp Glu Phe Glu

305

310

315

320

Thr Ile Tyr Pro Ser Gln Lys Asn Ala Ile Val Phe Pro His Val Asn

325

330

335

Ile Lys Thr Ala Val Leu Gly Met Glu Leu Arg Ala Asp Pro Phe Glu

340

345

350

Asn Lys Leu Ala Leu Ile Phe Glu Leu Gly Lys Ile Glu Gln Lys Glu

355

360

365

Arg Ile Arg Lys Trp Lys Ala Phe Glu Lys Lys Ser Gln Glu Ile Leu

370

375

380

Asp Gly Val Glu Ser Asn Ile Glu Asp Gln Ile Glu Leu Ser Asn Ile

385

390

395

400

Ala Ala Pro Ile Pro Ser Pro Ala Pro Ile Ala Ser Lys Thr Thr Thr

405

410

415

Ser Thr Met Thr Pro Asn Val Ala Gly Asp Ser Ile Thr Arg Pro Asp

420

425

430

Ser Pro Pro Arg Ser Gly Ser Ser Glu Cys Ser Phe Thr Ser Gly Ala

435

440

445

Gly Leu Ile Lys Asn Lys Leu Leu Asn Arg Lys Lys Pro Thr Lys Thr

450

455

460

Ser Val Asn Gly Val Ala Pro Val Asn Glu Ile Glu Pro Ala Asp Ala

465

470

475

480

Lys Tyr Thr Val Glu Glu Ala Glu Glu Arg Ile Ala Glu Ala Lys Glu

485

490

495

Arg Leu Phe Glu Asn Phe Ser Lys Ser Trp Cys Arg Lys Tyr Arg Val

500

505

510

Phe Glu Glu Thr Lys Cys Arg Lys Trp Lys Glu Arg Gly Glu Asn Ile

515

520

525

Trp Gly Ser His Asp Ile Asn Glu Val Met Lys Glu Lys Tyr Asp Ile

530

535

540

Val Glu Tyr Asp His Gly Lys Pro Leu Thr Gly Ala Ile Phe Arg Asp

545

550

555

560

Val Asp Leu Thr Leu Asp Lys Phe Lys Leu Gly Asp Val Asp Lys Phe

565

570

575

Leu Tyr Asp Tyr Ala Lys His Gln Pro Lys Leu Thr Tyr Ser Ile Leu

580

585

590

Cys Pro Met Tyr Val Glu Leu Lys Ala Arg Lys Phe Tyr Met Ile Leu

595

600

605

Lys Asp Tyr Pro Leu Pro Val Ala Ser Phe Pro Arg Ser Asn Thr Pro

610

615

620

Ser Ser Pro Thr Ile His Ile Lys Thr Asn Leu Val Ile His Glu Lys

625

630

635

640

Leu Phe Ser Arg Lys Glu Glu Leu Arg Tyr Ile Tyr Val Pro Phe Ser

645

650

655

Pro Ala Val Pro Asp Asp Gly Arg Ala Asp Asn Phe Tyr Ser Val Asn

660

665

670

Ile Pro Arg Thr Leu Thr Pro Val Lys Val Ala Ala Asp Phe Asn Cys

675

680

685

Asp Leu Asn Thr Asp Arg Ser Cys Thr Ile Ser Trp Cys Lys Ser Tyr

690

695

700

Gln Pro Ala Phe Ser Ala Met Ala Met Ala Phe Glu Asn Phe Thr Lys

705

710

715

720

Pro Ala Ile Asp Asp Ser Pro Ile Gly Trp Trp Asp Lys Ile Pro Leu

725

730

735

Ile Val His Gly Arg Tyr Gln Phe Asn Ile Ala Asn Glu Leu Cys Leu

740

745

750

His Met Lys Ser Gly Arg Asn Pro His Glu Leu Ile Gly Lys Asn Ala

755

760

765

Gly Phe Val Phe Cys Trp Lys Asn Asn Val Lys Leu Val Ile Asp Gly

770

775

780

Thr Ile Asn Ser Lys Asp Leu Val Val Leu Glu Ser Asp Asp Phe Ile

785

790

795

800

Phe Ala Ile Pro Asn Tyr Ser Ile Glu Glu Lys Asn Val Trp Ser Leu

805

810

815

Phe Tyr Asp Asp Phe Asp Asp Pro Val Pro Asp Ile Glu Leu Glu Ser

820

825

830

Lys Lys Phe Asn Lys Tyr Val Ile Lys Leu Ser Ser Ser Glu Arg Val

835

840

845

Arg Trp Val Leu Gly Met Leu Phe Glu Arg Asn Lys Tyr Pro Thr Gln

850

855

860

Lys Phe Ser Asp Glu Glu Leu Arg Val Ser Thr Phe Lys Pro His Tyr

865

870

875

880

Glu Val Met Ile Thr Asn Pro Ala Asn Glu Phe His Pro Asp Ser Tyr

885

890

895

Glu Gly Tyr Arg Ser Asp Tyr Val His Met Ser Leu Ser Val Ile Ser

900

905

910

Arg Ala Lys Thr Gly Glu Thr Ala Asn Thr Ala Tyr Phe Thr Pro Leu

915

920

925

Ser Phe His His Phe Phe Tyr Trp Trp Asp Thr Leu Leu His Tyr Ser

930

935

940

Pro Pro Pro Ile Lys Arg Gly Lys Leu Phe Glu Met Asp Gln Val Lys

945

950

955

960

Lys Pro Lys Ile Lys Phe Gly Thr His Met Phe Thr Met Lys Tyr Gln

965

970

975

Leu Ile Phe Asn Pro Val Thr Ile Ser His Leu Tyr Arg His Ser Thr

980

985

990

Ser Asp Val Pro Lys Lys Asn Ser Arg Val Ala Phe Thr Gly Leu Lys

995

1000

1005

Gly Arg Phe Asp Val Cys Glu Ile Asp Leu His Gln Arg Arg Glu Tyr

1010

1015

1020

Val Thr His Glu Asn Lys Lys Leu Asn Arg Lys Thr Lys Ile Arg His

1025

1030

1035

1040

Leu Lys Met Asn Gln Ala Glu Val Asn Ile Glu Asn Ala Asp Ala Arg

1045

1050

1055

Val Ile Tyr Ala Leu Phe Asn Asp Thr Ser Val Thr Gly Lys Leu Met

1060

1065

1070

Thr Tyr Leu Asn Ala Asp Ser Ser Asp Ser Ser Thr Asp Gly Ser Gln

1075

1080

1085

Ser Ser Asp Tyr Arg Gly Ser Ser Tyr Ser Arg Trp Leu Glu Asn Val

1090

1095

1100

Glu Ile Ser Asp Gly Asp Phe Ser Trp Tyr Asp Pro Lys Asp Phe Ile

1105

1110

1115

1120

Glu Leu Glu Val Arg Glu Pro Leu Ser Pro Tyr Pro Lys Thr Lys Ile

1125

1130

1135

Leu Pro Phe Phe Ala Thr Pro Lys Phe Ser Tyr Tyr Arg Glu Phe Thr

1140

1145

1150

Leu Gln Lys Asp Gly Pro Phe Pro Phe Gly Ser Glu Lys Ile His Asp

1155

1160

1165

Cys Ile Met Asn Leu Asp Lys Pro Ala Ile Val Gln Ser Arg Ile Leu

1170

1175

1180

Leu Asp Arg Leu Gln Asn Leu Glu Asp Glu Leu Ala His Asn Glu Glu

1185

1190

1195

1200

Met Leu Arg Arg Phe Lys Ile Gln Asn Gly Pro Glu Phe Gln His Asp

1205

1210

1215

Ile Arg Met Thr Glu Gln Glu Ile Ser Thr Leu Lys Glu Lys Val Glu

1220

1225

1230

Val Val Arg Ala Ala Tyr Asn Gly Phe Ser Asp Asp Glu Phe Gly Gly

1235

1240

1245

Leu Pro Ser Ser Ser Ala Asn Asn Val Ala Asp Asp Asp Asp Gly Ser

1250

1255

1260

Ser Ser Leu Ser Arg Ser Ser Thr Gly Leu Ser Ala Tyr Ser Ser His

1265

1270

1275

1280

Val Thr Gln Asp Gln Met Ser Gln Ala Ala Ala Phe Val Ser Ile Ala

1285

1290

1295

Glu Phe His Asn Arg Phe Ile Leu His Asn Leu Thr Leu Lys Trp Asp

1300

1305

1310

Asp Asn Ile Ser Lys Tyr Phe Ile Ser Tyr Met Lys Arg Ile Ala Glu

1315

1320

1325

Arg Lys Ser His Ile Tyr Tyr Met Thr Lys Tyr Ala Val Asp Leu Val

1330

1335

1340

Glu Lys Val Met Gln Glu Asn Ala Lys Glu Gly Glu Pro Thr Ser Gln

1345 1350 1355 1360

Pro Arg Glu Lys Val Phe Gln Lys Ser Phe Lys Gln Ala Asp Asn Ile

1365 1370 1375

Val Asp Ser Phe Glu Asp Asp Leu Asp Glu Val Lys Asp Ser Glu Arg

1380 1385 1390

Glu Glu Pro Glu Tyr Lys Tyr Leu Val Lys Leu Ile His Pro Gln Ile

1395 1400 1405

Gln Met Ile Ser Arg Lys Ala Pro Asp Ser Cys Val Leu Ile Ser Ser

1410 1415 1420

Lys Asp Leu Glu Leu Arg Ile Val Asp Ile Asn Met Lys Asp Arg Val

1425 1430 1435 1440

Asn Ile Leu Ser Glu Asn Asn Glu Met Thr Ala Arg Ile Glu Arg Arg

1445 1450 1455

Thr Gly Val Leu Phe Arg Glu Glu Gln Leu Phe Val Leu Gln Arg Asp

1460 1465 1470

Glu Val Val Ser Asn Ala Lys Ser Lys Phe Ala Lys Asn Gly Tyr Met

1475 1480 1485

Ser Asp Lys Tyr Asn Trp Pro Pro Trp Phe Glu Cys Glu Val Cys Tyr

1490 1495 1500

Asp Gly Ser Trp Ala His Glu Tyr Leu Val Ser Glu Lys Asn Thr Ile

1505

1510

1515

1520

Ala Ile Ile Gln Lys Ser Pro Asn Gln Leu Phe Ile Ser Ser Glu Lys

1525

1530

1535

Leu Glu Gln Gly Asn Glu Leu Val Val Tyr Leu Ser Lys Tyr Val Ile

1540

1545

1550

Asn Ala Thr Ser Ala Gln Tyr Ser Ser Ile Tyr Tyr Val Ile Thr Gly

1555

1560

1565

Leu Leu Leu Ser Asn Asp Asp Lys Glu Ser Asn Tyr Asn Gly Arg Leu

1570

1575

1580

Pro Arg Leu Met Asp Leu Ala Asp Ala Ser Asp Phe Glu Gly Leu Asp

1585

1590

1595

1600

Val Arg Val

<210> 106

<211> 728

<212> DNA

<213> Candida albicans

<400> 106

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<210> 107

<211> 52

<212> PRT

<213> *Candida albicans*

<400> 107

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Asn Phe Phe Val Gln Thr Phe Trp Cys Lys Ile Ser Thr Gln Ile Val

20

25

30

Glu Lys Asn Ile Phe Thr His Ser Leu Pro Leu Phe Phe Phe Phe Thr

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45

Ile Ala Thr Asn

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<210> 108

<211> 440

<212> DNA

<213> Candida albicans

<400> 108

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<210> 109

<211> 55

<212> PRT

<213> Candida albicans

<400> 109

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Phe Lys Phe Lys Asp Trp Glu Thr Arg Val Phe Ser Tyr Cys Leu His

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Phe Leu Lys Phe Asp Lys Arg Ile Val Ser Leu Cys Leu Ile Tyr Tyr

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45

Glu Met Ile Arg Ile Lys Lys

50

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<210> 110

<211> 481

<212> DNA

<213> Candida albicans

<400> 110

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<210> 111

<211> 126

<212> PRT

<213> Candida albicans

<400> 111

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Phe Cys Gly Leu Leu Thr Lys Lys Asn Val Val Leu Thr Gln Arg Tyr

20 25 30

Pro Lys Thr Cys Gly Leu Lys Lys Val Pro Ile Ser Gln Pro Gln Gln

35 40 45

Pro Leu Gln Thr Pro Ser Phe Ala Gln His Ile Phe Ile Gly Ser Pro

50 55 60

Thr Cys His Tyr Asn Leu Arg Ser Pro Ser Leu Ile Val Val Ala Pro

65 70 75 80

His Ser Leu Lys Leu Thr Pro Asn Phe Ala Ile Phe Gln Lys Phe Ser

85 90 95

Leu Phe Arg Val Val His Ala Gln Ile His Phe Phe Ser Ala Gly Pro

100 105 110

Lys Asn Thr Arg Phe Phe Asn Pro Pro Glu Leu Asp Val Tyr

115 120 125

<210> 112

<211> 259

<212> PRT

<213> Candida albicans

<400> 112

Met Ser Ile Ile Phe Arg Lys Arg Leu Asp Ser Asp Arg Asn Ile Asp

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Ala Ser Leu Tyr Phe Gly Asn Ile Asp Pro Gln Val Thr Glu Leu Leu

20 25 30

Met Tyr Glu Leu Phe Ile Gln Phe Gly Pro Val Lys Ser Ile Asn Met

35 40 45

Pro Lys Asp Arg Ile Leu Lys Thr His Gln Gly Tyr Gly Phe Val Glu

50 55 60

Phe Lys Asn Ser Ala Asp Ala Lys Tyr Thr Met Glu Ile Leu Arg Gly

65 70 75 80

Ile Arg Leu Tyr Gly Lys Ala Leu Lys Leu Lys Arg Ile Asp Ala Lys

85 90 95

Ser Gln Ser Ser Thr Asn Asn Pro Asn Asn Gln Thr Ile Gly Thr Phe

100 105 110

Val Gln Ser Asp Leu Ile Asn Pro Asn Tyr Ile Asp Val Gly Ala Lys

115 120 125

Leu Phe Ile Asn Asn Leu Asn Pro Leu Val Asp Glu Ser Phe Leu Met
 130 135 140

Asp Thr Phe Ser Lys Phe Gly Thr Leu Ile Arg Asn Pro Ile Ile Arg
 145 150 155 160

Arg Asp Ser Glu Gly His Ser Leu Gly Tyr Gly Phe Leu Thr Tyr Asp
 165 170 175

Asp Phe Glu Ser Ser Asp Leu Cys Ile Gln Lys Met Asn Asn Thr Ile
 180 185 190

Leu Met Asn Asn Lys Ile Ala Ile Ser Tyr Ala Phe Lys Asp Ser Ser
 195 200 205

Val Asp Gly Lys Lys Ser Arg His Gly Asp Gln Val Glu Arg Lys Leu
 210 215 220

Ala Glu Ser Ala Lys Lys Asn Asn Leu Leu Val Thr Lys Thr Ser Lys
 225 230 235 240

Ala Gly Thr Thr Lys Gly Asn Lys Arg Lys Asn Lys Pro His Lys Val
 245 250 255

Thr Lys Pro

<210> 113

<211> 2021

<212> DNA

<213> *Candida albicans*

<400> 113

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<210> 114

<211> 648

<212> PRT

<213> Candida albicans

<400> 114

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1

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15

Tyr Asp Lys Val Val Arg Gly Asp Pro Asn Ala Thr Phe Val Val Tyr

20

25

30

Ser Val Asp Lys Asn Ala Thr Met Asp Val Thr Glu Thr Gly Asp Gly

35

40

45

Ser Leu Glu Asp Phe Val Glu His Phe Thr Asp Gly Gln Val Gln Phe
50 55 60

Gly Leu Ala Arg Val Thr Val Pro Gly Ser Asp Val Ser Lys Asn Ile
65 70 75 80

Leu Leu Gly Trp Cys Pro Asp Ser Ala Pro Ala Lys Leu Arg Leu Ser
85 90 95

Phe Ala Asn Asn Phe Ala Asp Val Ser Arg Val Leu Ser Gly Tyr His
100 105 110

Val Gln Ile Thr Ala Arg Asp Gln Asp Asp Leu Asp Val Asn Glu Phe
115 120 125

Leu Asn Arg Val Gly Ala Ala Ala Gly Ala Arg Tyr Ser Thr Gln Thr
130 135 140

Ser Gly Leu Lys Lys Pro Ser Pro Ala Ala Pro Lys Pro Thr Ser Lys
145 150 155 160

Pro Val Val Ala Lys Ser Ser Ser Ala Ser Lys Pro Ser Phe Val Pro
165 170 175

Lys Ser Thr Gly Lys Pro Val Ala Pro Ala Lys Pro Lys Pro Lys Asn
180 185 190

Ile Thr Lys Asp Ala Gly Trp Gly Asp Ala Glu Asp Val Glu Glu Arg
195 200 205

Asp Phe Asp Lys Lys Pro Leu Asp Asn Val Pro Ser Ala Tyr Lys Pro
210 215 220

Thr Lys Val Asn Ile Asp Glu Leu Arg Lys Gln Lys Ser Asp Thr Thr
225 230 235 240

Ser Ser Thr Pro Lys Thr Phe Lys Ser Glu Pro Gln Glu Glu Lys Asn
245 250 255

Asp Asp Asp Gly Gln Ser Lys Pro Leu Ser Glu Arg Met Lys Ala Tyr
260 265 270

Asp Gln Pro Ser Ser Ser Asp Gly Arg Leu Thr Ser Leu Pro Lys Pro
275 280 285

Lys Ile Gly His Ser Val Ala Asp Lys Tyr Lys Ala Ser Ala Ser Gly
290 295 300

Asn Gly Ala Ala Pro Ala Phe Gly Ala Lys Pro Ala Phe Gly Thr Gln
305 310 315 320

Ser Val Asp Ser Arg Lys Asp Lys Leu Val Gly Gly Leu Ser Arg Asp
325 330 335

Phe Gly Ala Glu Asn Gly Lys Thr Pro Ala Gln Ile Trp Ala Glu Lys
340 345 350

Arg Gly Lys Tyr Lys Thr Val Ala Ser Asp Glu Lys Glu Thr Asn Ser
 355 360 365

Ser Glu Lys Val Asp Glu Pro Glu Glu His His Ala Ala Asp Leu Ala
 370 375 380

Lys Lys Phe Glu Glu Lys Ala Asn Ile Ala Gly Asp Thr Pro Ser Leu
 385 390 395 400

Pro Thr Arg Asn Leu Pro Pro Ala Pro Pro Ala Arg Glu Thr Ala Ile
 405 410 415

Pro Ser Asn Glu Lys Asp Lys Xaa Glu Lys Glu Glu Glu Glu Gln Ala
 420 425 430

Pro Ala Pro Ser Leu Pro Thr Arg Asn Leu Pro Pro Pro Ser Gln Arg
 435 440 445

Gln Pro Glu Pro Glu Pro Glu Pro Glu Glu Glu Glu Glu Glu Glu
 450 455 460

Xaa Glu Ala Pro Ala Pro Ser Leu Pro Ala Arg Asn Leu Pro Pro Ala
 465 470 475 480

Pro Lys Ala Glu Ala Glu Glu Ser Lys Lys Gln Ser Thr Thr Ala Thr
 485 490 495

Ala Glu Tyr Asp Tyr Glu Lys Asp Glu Asp Asn Glu Ile Gly Phe Ser
 500 505 510

Glu Gly Asp Leu Ile Ile Asp Ile Glu Phe Val Asp Asp Asp Trp Trp
515 520 525

Gln Gly Lys His Ala Lys Thr Gly Glu Val Gly Leu Phe Pro Ala Thr
530 535 540

Tyr Val Ser Leu Asn Glu Lys Ala Ala Asp Lys Glu Glu Glu Ala Pro
545 550 555 560

Ala Pro Ala Pro Ala Pro Ser Leu Pro Ser Arg Glu Glu Thr Gln Ala
565 570 575

Ala Pro Ala Leu Pro Ser Arg Ser Glu Gln Lys Pro Glu Ser Lys Thr
580 585 590

Ala Thr Ala Glu Tyr Asp Tyr Glu Lys Asp Glu Asp Asn Glu Ile Gly
595 600 605

Phe Ser Glu Gly Asp Leu Ile Val Glu Ile Glu Phe Val Asp Asp Asp
610 615 620

Trp Trp Gln Gly Lys His Ser Lys Thr Gly Glu Val Gly Leu Phe Pro
625 630 635 640

Ala Asn Tyr Val Val Leu Asn Glu
645